SUMMER
25¢
ANC
FANTASTIC STORY QUARTERLY
A THRILLING PUBLICATION
The Exile of the Skies
a complete novel by RICHARD VAUGHAN
THE LAST PLANET
a novelet of the future by R. F. STARZL
THE LIGHT BENDER
an amazing fantasy by FRANK K. KELLY

YOU CAN'T LOSE!

NATIONALLY ADVERTISED PRODUCTS

NO EXPERIENCE NECESSARY

NO MONEY TO INVEST

FREE SAMPLE OUTFITS

FULL OR PART TIME

HAVE A PROFIT MAKING BUSINESS OF YOUR OWN

A LIFETIME FUTURE

Man or woman—young or old, YOU can earn a steady income in full or spare time as an independent Kendex dealer. Amazing and almost "impossible" earnings can become a reality for you. Herbert Armstrong of Tenn. earned $202 in 9 days. C. O. Watkins of Oregon sent 92 orders in one day. You have the same opportunity to duplicate these exceptional earnings. Over one million dollars will be earned in 1950 by Kendex dealers—why not let us establish you in your own business and get a share of these wonderful earnings?

KENDEX NYLONS REPLACED FREE . . .

if they run or snag within guarantee period up to three months! Impossible? It's true! No matter what the cause—hard use or deliberate abuse—whether it is fault of the hose or the wearer—Kendex nylons are replaced FREE if they run, snag or become unfit for wear within the guarantee period. How could any woman resist a positive guarantee of satisfaction when she can obtain it without paying any more than other standard advertised brands? Kendex nylons are NOT sold in stores, so you have no competition. Complete line includes everything from heavy 70 denier service weight to gossamer luxurious ultra sheer 15 denier 60 gauge. Proportioned sizes and lengths. Latest colors plus white.

LINGERIE - ROBES - HOUSECOATS - MEN'S HOSE

In addition to the sensational Kendex nylons, you will have a complete line of glamorous lingerie, beautiful robes and housecoats plus a complete line of Kentcraft mens' hosiery guaranteed for one full year. Any pair or pairs of men's hose that does not give satisfactory wear within one year of purchase will be replaced FREE!

NATIONALLY ADVERTISED

Kendex will spend over $350,000.00 in 1950 to tell millions of readers of the advantages in buying from you. Almost every issue of Good Housekeeping, Saturday Evening Post, McCall's, Women's Home Companion and Ladies' Home Journal carry our advertising in addition to many others. Kendex has advertised in Life, Look, Collier's, etc. Awarded Good Housekeeping Seal. Thousands of orders are shipped daily from coast to coast.

FOUR MONEY-MAKING LINES

- WOMEN'S NYLON HOSIERY
- GLAMOROUS LINGERIE
- HOUSECOATS—ROBES
- MEN'S HOSIERY

MAIL TODAY

NOTHING TO PAY

NO OBLIGATION

FREE NYLON STOCKING

EVERYTHING GIVEN FREE

Risk nothing! Mail coupon and we will send you, free and prepaid, complete money-making outfits including sample nylon stocking, samples of lingerie, robes, housecoats and men's hose fabrics and everything you need to immediately start making money. Complete outfits become your property even if you don't send any business. Simply write orders, we deliver and collect. Advance cash plus huge bonus. No money or experience needed. Mailing the coupon is all you need to start on the road to a 52-weeks-of-the-year high paying business of your own. You have everything to gain and nothing to lose.

KENDEX COMPANY, BABYLON, 743 N.Y.

KENDEX COMPANY
BABYLON, 743, N.Y.

Date_____ 1950

Send me, free and prepaid, everything I need to make money as a Kendex dealer, including sample stocking etc. There is nothing for me to pay now or later and I am under no obligation in accepting your money-making outfits.

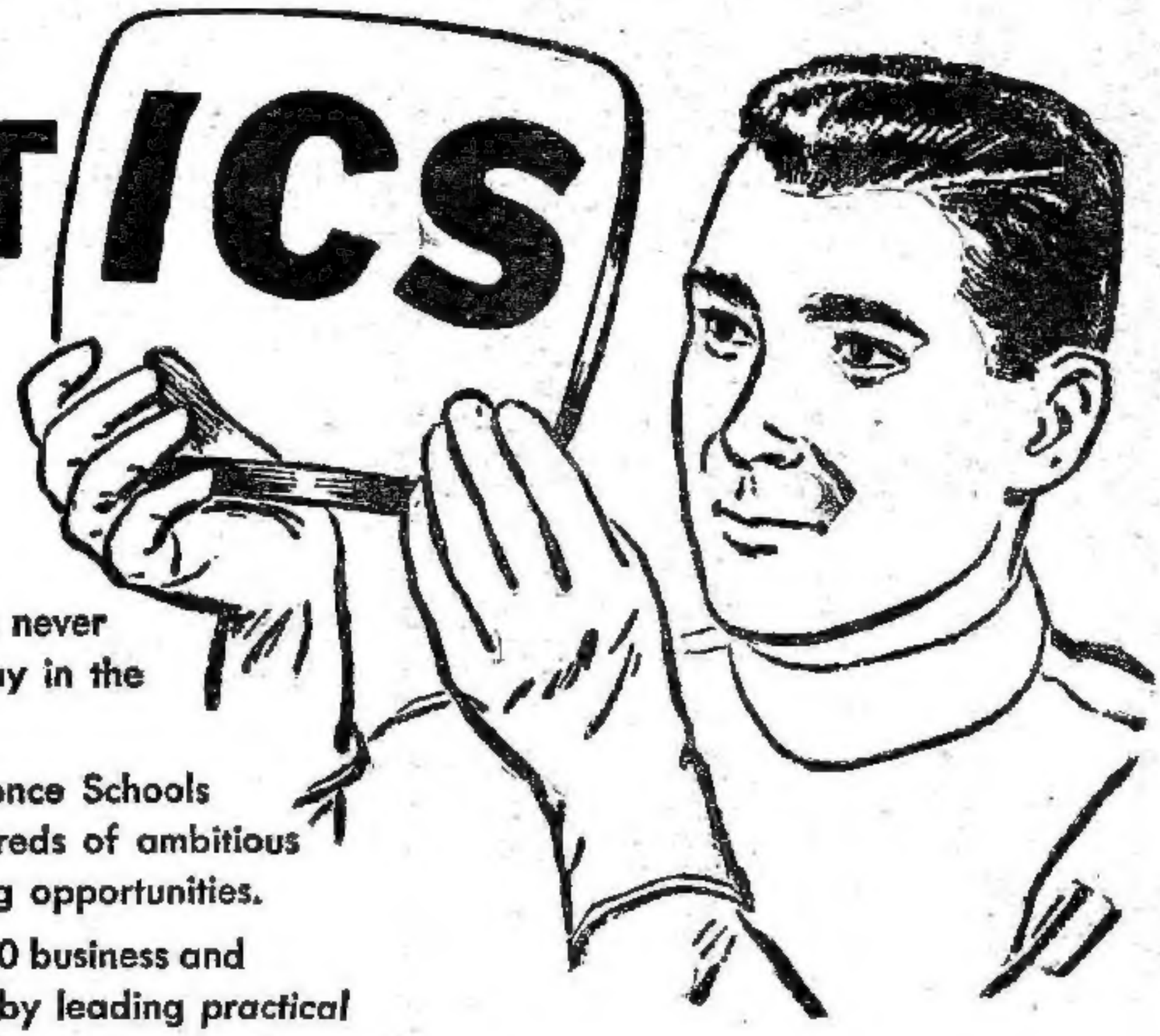
Name_____

Address_____

City_____ State_____

There's BIG MONEY in

PLASTICS



- Your chances for success have never been greater than they are today in the field of plastics.
- The International Correspondence Schools Course in Plastics is fitting hundreds of ambitious men for these great and growing opportunities.
- All I.C.S. Courses (covering 400 business and technical subjects) are prepared by leading *practical* authorities, constantly revised to meet new developments.

Yet the cost of I.C.S. training is surprisingly low.

- Join the men who will be tomorrow's leaders. Mail this coupon *today!*

Inspecting a plastic lens similar to type used to magnify television images.

INTERNATIONAL CORRESPONDENCE SCHOOLS

APPROVED under the G.I. BILL

BOX 3968-S, SCRANTON 9, PENNA.

Without cost or obligation, please send me full particulars about the course BEFORE which I have marked X:

☐ **PLASTICS**

Air Conditioning and Plumbing Courses
☐ Air Conditioning
☐ Heating ☐ Plumbing
☐ Refrigeration ☐ Steam Fitting

Chemical Courses
☐ Chemical Engineering
☐ Chemistry, Analytical
☐ Chemistry, Industrial
☐ Chemistry, Mfg. Iron & Steel
☐ Petroleum Refining
☐ Pulp and Paper Making

Civil Engineering, Architectural and Mining Courses
☐ Architecture
☐ Architectural Drafting
☐ Bridge and Building Foreman
☐ Building Estimating
☐ Civil Engineering ☐ Coal Mining
☐ Contracting and Building
☐ Highway Engineering
☐ Reading Structural Blueprints
☐ Sanitary Engineering
☐ Structural Drafting
☐ Structural Engineering
☐ Surveying and Mapping

Communications Courses
☐ Electronics
☐ Practical Telephony ☐ Radio, General
☐ Prac. FM and Television
☐ Radio Operating ☐ Radio Servicing
☐ Telegraph Engineering

Electrical Courses
☐ Electrical Drafting
☐ Electrical Engineering
☐ Electric Light and Power
☐ Lighting Technician
☐ Practical Electrician

Internal Combustion Engines Courses
☐ Auto Technician ☐ Aviation
☐ Diesel-Electric
☐ Diesel Engines ☐ Gas Engines

Mechanical Courses
☐ Aeronautical Engineer's, Jr.
☐ Aircraft Drafting ☐ Flight Engineer
☐ Forging ☐ Foundry Work
☐ Heat Treatment of Metals
☐ Industrial Engineering
☐ Industrial Instrumentation
☐ Industrial Metallurgy
☐ Machine Shop
☐ Mechanical Drafting
☐ Mechanical Engineering
☐ Mold-Loft Work
☐ Patternmaking—Wood, Metal
☐ Reading Shop Blueprints
☐ Sheet-Metal Drafting
☐ Sheet-Metal Worker
☐ Ship Drafting ☐ Ship Fitting
☐ Tool Designing ☐ Toolmaking
☐ Welding Engineering
☐ Welding—Gas and Electric

Railroad Courses
☑ Air Brake ☐ Car Inspector
☐ Diesel Locomotive ☐ Locomotive Eng'r
☐ Locomotive Fireman
☐ Locomotive Machinist
☐ Railroad Section Foreman
☐ Stationary-Diesel Loco. Eng.
☐ Steam-Diesel Loco. Eng.

Stationary Eng'ring Courses
☐ Boilermaking
☐ Combustion Engineering
☐ Engine Running ☐ Marine Eng'r's
☐ Power Plant Eng'r'g ☐ Steam Eng'r

Textile Courses
☐ Cotton Manufacturing
☐ Loom Fixing ☐ Rayon Weaving
☐ Textile Designing
☐ Woolen Manufacturing

Business and Academic Courses
☐ Accounting ☐ Advertising
☐ Bookkeeping ☐ App. Psychology
☐ Business Administration
☐ Business Correspondence
☐ Cert. Pub. Acct. ☐ Bus. Law
☐ Commercial ☐ Commercial Art
☐ Cost Accounting ☐ Federal Tax
☐ First Year College
☐ Foremanship ☐ French
☐ Good English ☐ High School
☐ Higher Mathematics
☐ Industrial Supervision
☐ Motor Traffic ☐ Postal Civil Service
☐ Retail Bus. Manage't ☐ Retailing
☐ Salesmanship ☐ Secretarial
☐ Sign Lettering ☐ Illustration
☐ Spanish ☐ Stenography
☐ Traffic Management

Name_____ Age_____ Home Address_____

City_____ State_____ Present Position_____

Employed by_____ Working Hours_____ A.M. to_____ P.M.

Length of Service in World War II_____

Enrollment under G.I. Bill approved for World War II Veterans. Special tuition rates to members of the Armed Forces. Canadian residents send coupon to International Correspondence Schools Canadian, Ltd., Montreal, Canada.

SPACED OUT LIBRARY

FANTASTIC STORY QUARTERLY

Vol I, No. 2 — A THRILLING PUBLICATION — SUMMER, 1950

A Complete Full-Length Novel

THE EXILE OF THE SKIES **RICHARD VAUGHAN 11**

Castoffs in the trackless universe, a man and a girl build their fantastic life together when Knute Savary, greatest scientist in history, is banished by a world whose doom he alone can foresee!

Two Complete Novelets

THE LAST PLANET . . . . . R. F. STARZL 108

When the entire Solar System is headed for destruction, they who can save humanity are forced to combat those they would rescue!

THE MAN FROM BEYOND . . . JOHN BEYNON HARRIS 130

The stranger from Earth was an alien on Venus—a man whose own future existence lay millions of years ago in the distant past!

Short Stories

THE LIGHT BENDER . . . . . FRANK K. KELLY 99

Science Engineer Hend could make man invisible—not invincible!

THE BORE . . . . . JAMES BLISH 124

Jane Gillespie finds out that Prosser knows celestial mechanics

A THIEF IN TIME . . . . . RAYMOND A. YOUNG 146

Tony was a terrific transdimensional crook till time trapped him

THE MOON AND MR. WICK . . . . JACK WILLIAMSON 149

The stupidity of superiors may bar a man from his purpose, but—

Features

COSMIC ENCORES . . . . . THE EDITOR 6

A department where science fiction readers and the editor meet!

FROM THE ANNALS OF SCIENCE . . . . S. M. RITTER 156

An interesting and entertaining selection of facts and oddities

Published quarterly and copyright 1950 by Best Books, Inc., 29 Worthington Street, Springfield 3, Mass. Editorial and executive offices, 10 East 40th Street, New York 16, N. Y. Subscriptions: (12 issues) $3.00; single copies, $.25; foreign postage extra. Entry as second class matter pending at the post office at Springfield, Mass. Material is submitted at risk of the sender and must be accompanied by self-addressed, stamped envelopes. All characters in stories and semi-fiction articles are fictitious. If the name of any living person or existing institution is used it is a coincidence.

Printed in the U. S. A.

Our new refrigerator had a new fur coat in it!

SMART WOMAN! She didn't have to go without either a fur coat or a new refrigerator. The money she saved by getting a modern air-conditioned ICE refrigerator bought a magnificent fur coat.

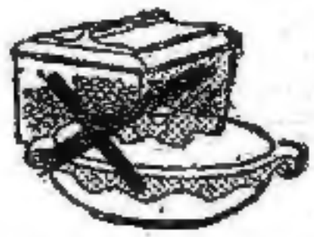
You can do the same! You, too, can have a new refrigerator *and* that new fur coat—or new furniture—or electric washer.

And when you have your new ICE refrigerator you'll enjoy the finest in complete, scientific food protection—in a beautiful, roomy refrigerator you'll be proud to own.

See your local Ice Company today. You'll be surprised to learn how much you'll save by buying a modern air-conditioned ICE refrigerator.

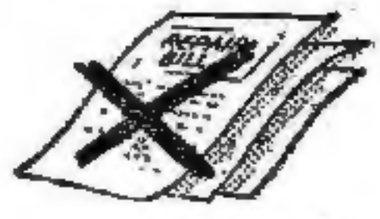
WHY YOU SHOULD HAVE A MODERN ICE REFRIGERATOR

ECONOMICAL TO USE

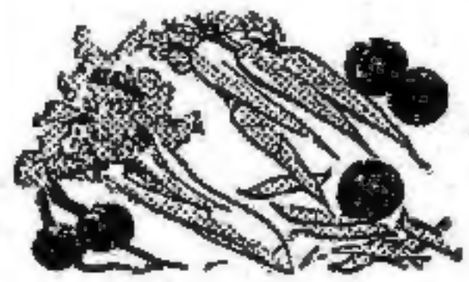


NO COVERED DISHES

LEFT-OVERS KEEP BETTER



NO REPAIR BILLS



VEGETABLES STAY GARDEN-FRESH

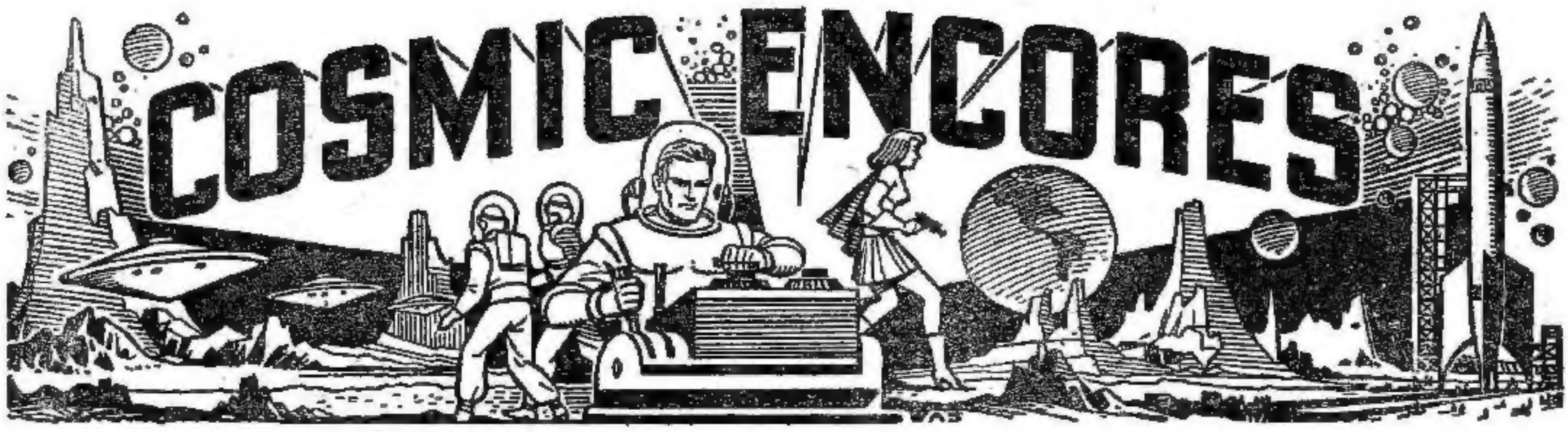
LOTS OF ICE FOR DRINKS

FREE!

"Money Saving Tips"—a valuable 24-page marketing guide. Mail a post card now to National Association of Ice Industries, Dept. TJ, 1706 L Street, N. W. Washington 6, D. C.

Genuine **ICE**

1850—ONE HUNDRED YEARS OF ICE PROGRESS—1950



A DEPARTMENT WHERE SCIENCE FICTION READERS AND THE EDITOR MEET

THE entire process of putting out a new magazine bears a certain similarity to the pushing and pulling and tugging and hauling that went into the business of getting the huge United States battleship Missouri off its mudbank in Chesapeake Bay—on a somewhat smaller scale, of course.

But for those few actually involved in the process it is just about as soul-searing. First, of course, comes the decision to publish the new title. Then comes the problem of assembling material and of selecting from the assemblage those stories which seem most likely to result in a successful first issue.

Finally the job gets done—and our paper battleship is waiting for release from bondage in the technical maw of being printed and achieving national distribution. The public, of course, has yet to be heard from.

Then at last FANTASTIC STORY QUARTERLY is in print—glossy and shiny and on the whole looking a lot better than its assemblers dared hope. But the waiting is not over—not until readers' letters come in and the success of the publication is indicated.

We'll Be Around!

It is our pleasant task in this second-issue editorial to state that FSQ is off its mudbank and has not sunk in the deeper waters of public reaction. Apparently it is going to be around for quite some while to come!

Our first issue has won enthusiastic comment from readers all over the country, for which we of the crew are breathing a hearty series of hosannahs. And to which we wish to add our thanks to all of you who have made such rejoicings possible.

Selection of suitable stories for this magazine is a task of no small magnitude. It involves close reading of literally hundreds of stories, novelets and novels. A great number of them, through dated themes or writing styles, are hardly suitable for reappearance in print at this late era. And during this wade-through process the deadline draws closer and closer.

The Best Is to Come

Inevitably, after the lists are closed for the first issue, fine stories turn up in large batches. Hence, though we felt our opening edition to be as fine as we could make it, we have a hunch that the best is yet to come.

In this second issue we present, we feel, one of the finest of all science-fiction novels in Richard Vaughan's THE EXILE OF THE SKIES. Certainly it is one of the most exciting tales of space ever put to typewriter. And novelets and short stories are on the whole stronger than those in our first issue.

The process of improvement seems to be continuable indefinitely. And by way of proof we intend to say a few words about the stories to come in—

Our Next Issue!

Autumn is synonymous with fall—and a fall is what traps mining engineers Frank Comstock and Philip Clay in what is probably the most fantastic subterranean world of all science fiction history in Stanton A. Coblentz' justly famed IN CAVERNS BELOW.

Their tumble, while seeking mineable minerals in abandoned stopes under the Great Southwest, is the result of an earthquake caused by a tremendous underground battle between the two lost

nations of Wu and Zu. They become separated in the resultant confusion and Comstock, the narrator, is imprisoned as a spy by soldiers of Wu.

He is barely saved from horrid ray-gun execution by the metal-bound notebook he carries over his heart, and the contents of this notebook result in his being given into the custody of that noted Wuvian student of languages, Professor Tan Trum.

Wu, like Zu, is governed by rigid caste rule, with the ruling elite so effete they can scarcely breath without iron lungs. Birth decontrol is practised by law to permit enough citizens to be born so that they may be "turned over"—polite Wuvian for killed—in the appalling double-massacres in which the armies of Wu and Zu indulge as their national sport.

Women are considered increasingly beautiful by the numbers of wrinkles they can show on their faces and added poundage for their figures—a fact which Comstock discovers first hand when Tan Trum's loveliest daughter falls violently in love with him and seeks to stir his responses by fattening up and growing wrinkles.

In fact the entire inversion of logic which features life in both underground kingdoms makes IN CAVERNS BELOW one of the most hilarious satires since Gulliver hung up his traveling cloak for good. And its too-close-for-comfort similarity to many actualities of life on the surface in the machine age give it the bite of etcher's acid.

To this hilarity add constant danger, a swift-moving melodramatic plot and some highly ingenious new pseudo-scientific wrinkles and you have a faint inkling of what lies ahead for you in the land of Wu. But for full flavor and full excitement you'll have to let the narrator tell you his story himself.

Garth Bentley heads the novelet parade with BEYOND THE STAR CURTAIN, a story of Earth and its inhabitants in the far future, as returned to by space-travelers Derek Porter and Verne Williams. They have, it seems, been trapped for an unknown length of time on a planet suffering from a sort of time stasis.

They return to a world in ruins in a

[*Turn page*]

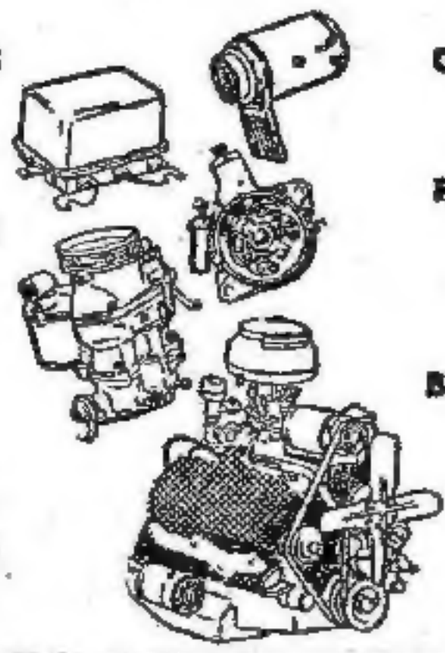
SAVE WITH

Authorized

RECONDITIONED FORD ENGINE ACCESSORIES

• When you see this emblem on the reconditioned engine accessories and reconditioned engines you buy, you can be *sure* you've bought quality, performance, long life and real value.

For this *Authorized* reconditioner's emblem means that the engine and accessories are thoroughly reconditioned to Ford's famed hi-precision standards . . . only Genuine Ford Parts have been used . . . each unit rigidly tested by *Authorized* Ford reconditioners. That means you can buy with confidence, save time and money.



CARBURETORS
FUEL PUMPS
DISTRIBUTORS
ARMATURES
★
AT SELECTED INDEPENDENT GARAGES

GENERATORS
VOLTAGE REGULATORS
STARTERS
BRAKE SHOES
★
AT FORD DEALERS

FORD Division of FORD MOTOR COMPANY

AUTO
BOOKS ON APPROVAL

SEND NO MONEY. Just mail the coupon for a complete set of 4 Big, Thick Auto Books, 20th Edition. Over 2700 Pages! Whether you are a mechanic or helper, expert or apprentice, auto owner or driver, take immediate advantage of this FREE EXAMINATION OFFER.

MAKE GOOD MONEY NOW
HOLD A PERMANENT JOB

America wants its automobiles kept in good repair. Men with "know how" are in demand, at big pay. These books will help you get and hold an important job, or give you a chance to go into business for yourself now or later. Any man who half tries to improve himself can learn auto servicing and repairing by this quick reference method. Use the JIFFY INDEX to find easily understood answer to any auto problem. These wonder books prepared by eleven of America's great automobile engineers. Many hundreds of valuable illustrations. Send the coupon TODAY.

CAN YOU FIX IT?

These wonder books tell step by step HOW to make difficult repairs and adjustments, how to keep a car at maximum efficiency, including latest improvements in car design and operation. Engine troubles and how to correct them well covered.

4 BIG, THICK VOLUMES
Over 2700 pp., 2000 illustrations, wiring diagrams, etc. Beautiful modernistic, washable cloth binding.

A year's consulting privileges with our engineers now given with these books without extra charge. *Publishers Since 1898*

AMERICAN TECHNICAL SOCIETY, Dept. AA-49
Drexel Ave. at 58th St., Chicago 37, Ill.
I would like to examine your 4-Volume Set of Auto Books. I will pay the delivery charges only, but if I choose I may return them express collect. If after 10 days' use I prefer to keep them, I will send you $2 and pay the balance at the rate of only $3 a month until $24.80 has been paid. Include consulting service as offered above.

Name .....
Address .....
City ..... State .....
Please attach letter stating age, occupation, employer's name and address, and name and address of at least one business man as reference. Men in service, also please give home address.

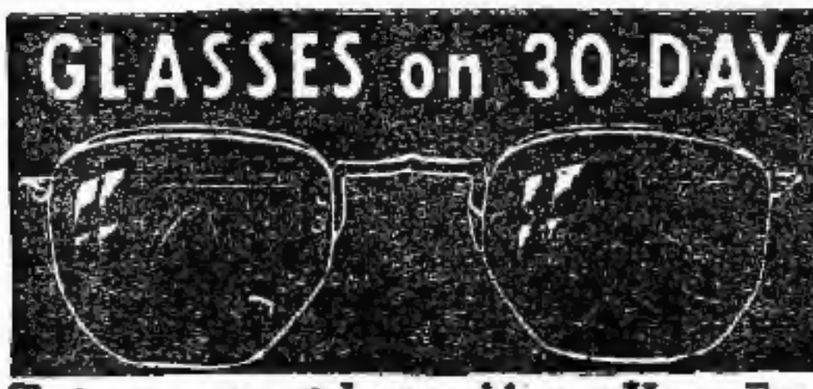
CONFIDENTIAL LOAN SERVICE
Borrow $50 to $300.00
BY MAIL

Need money? No matter where you live . . . you can borrow BY MAIL, $50.00 to $300.00 this easy, quick, confidential way. **No endorsers needed.** Employed men & women of good character eligible. Solve your money problems quickly and in complete privacy with a loan made by mail. Employer, relatives and friends will not know you are applying for a loan. Convenient monthly payments. Rush coupon—giving occupation—for Application Blank sent FREE in plain envelope. No obligation. **State Finance Co., 210 State Finance Bldg., Dept. G-82, Des Moines 8, Iowa**

STATE FINANCE CO., Dept. G-82
210 State Finance Bldg., Des Moines 8, Iowa
Please rush FREE Application Blank.

NAME.....
ADDRESS.....
CITY.....STATE.....
Occupation.....Age.....

GLASSES on 30 DAY TRIAL!



SAVE UP TO $15.00

Test your eyes at home with our Home Eye Tester. *See far and near.* Perfect satisfaction guaranteed. Save money.

FREE Send name, address, age for 30 Day Trial Offer, Free Eye Tester, Latest Style Catalog and full information.

Agents Wanted

CLARK OPTICAL CO.
1148 West Chicago Ave. Dept. C-1008 Chicago 22, Ill.

future incredibly distant for the span of normal human life. They find humanity all but destroyed, harried by the results of its own mistakes and by the fantastic growth of the insect world.

Seeking some spot on which they can at least get their bearings, they are befriended by a girl who offers to lead them to the last refuge of her dwindling tribe—and become prisoners of giant insects on the way.

This is one of the early stories of its always-exciting and imaginative genre—and one of the very best. You should find it at least equal and perhaps superior to more recent tales in which the insects have dominated humanity.

A different sort of menace to Earth features our second novelet-to-come, THE SPORE DOOM by Eando Binder. In this instance it is a fungus growth which is well on the way to blanketing all surface life before humanity becomes aware of it.

And as usual, there are human toadstools among the mushrooms—in this instance what is probably the most complete villain on stf record in Max Spardo, who virtually starts the whole ghastly mess.

But there are stout as well as loving hearts beating in the bosoms of young Ray Cantwell and Vina Delahr, the latter the object of Spardo's evil ambitions. And between them they set out, firm of lip and clear of eye, to foil Spardo and restore Earth to something approaching its previous felicity.

If you like them clean-cut and swift and deadly, you'll like THE SPORE DOOM. It is a sound example of how science fiction was being written seventeen years ago. And with it will be plenty of short stories, almost all of them retrieved from the dusty files of oblivion and written by names famous in stf—and of course your Editor will be on hand to tell you what's what and what's coming.

LETTERS FROM OUR READERS

WE included in our first issue a request for listings of back issues and prices of copies in good condition of the magazines on which the bulk of FSQ is based. And we wish to thank Forrest

J. Ackerman, 236½ North New Hampshire, Hollywood 4, California, Walter A. Coslet, P.O. Box No. 6, Helena, Montana, Claude Held, 372 Dodge Street, Buffalo 8, New York, and Ed Wood, 31 North Aberdeen Street, Chicago 7, Illinois, for responding to this appeal.

Some of our old bound volumes are not in the best of shape and we are still interested in getting such information from any collectors or dealers who have all or some of the old Gernsback magazines and have not yet written in. Address THE EDITOR, FANTASTIC STORY QUARTERLY, SUITE No. 1400, 10 EAST 40TH STREET, NEW YORK 16, NEW YORK.

And now for some of the other letters dealing more generally with FSQ. First crack goes to

SO IN LOVE
by Rodney Palmer

Dear Editor: I am madly in love with the new magazine. As far as I'm concerned it's all I hoped it would be and more. Without a doubt we've all been watching for a wonderful thing like this for a long time.

Science Fiction has a truly great past from which to draw. You shouldn't have any trouble at all finding old masterpieces, and I imagine the letters will be pouring in from readers who can remember way further back than I can and there'll be plenty of suggestions and nominations.

I've always considered myself an old-time fan. I can reach back about ten years or thereabouts. But those names you name are, to me, just names. I missed plenty of the old good ones. However, let me travel as far backward as I can.

Allow me to suggest a revival of the old Via Jupiter series. More Pete Manx yarns, of course. In the novel field, oh what wonders you can come across! From *Startling Stories* when that old favorite was venturing tentatively into the light of day: *Five Steps To Tomorrow, Giants From Eternity, The Bridge To Earth, Twice In Time* ad infinitum.

And what's wrong with making room for a couple of newly-written yarns in Fantastic Quarterly? It makes the comparison so obvious. But make the boys come across with *stories*. With an H Bomb on the way, who's got time to read literature anymore?—226 West 60th Street, Chicago 21, Illinois.

There will continue to be a couple of new stories per issue in FSQ, just to permit the business of comparisons, which are not always odious by the proverbial long shot. But we shan't be drawing on either the early STARTLING STORIES or THRILL-

(Continued on page 157)

TO PEOPLE Who Want To Write
but can't get started

Do you have that constant urge to write but fear that a beginner hasn't a chance? Then listen to what the former editor of Liberty said on this subject:

"There is more room for newcomers in the writing field today than ever before. Some of the greatest of writing men and women have passed from the scene in recent years. Who will take their places? Who will be the new Robert W. Chambers, Edgar Wallace, Rudyard Kipling? Fame, riches and the happiness of achievement await the new men and women of power."

Sells 95 Stories and Novelettes

"The introduction you gave me to your editor friend, resulting in my present assignment to do a complete novel for him monthly, is doubly appreciated, especially since I finished my N.I.A. training some time ago, and, consequently, have no call on your service. Here is concrete evidence that interest in your students continues indefinitely. To date now, I have sold 95 stories and novelettes to 20 national magazines."—Darrel Jordan, P.O. Box 279, Friendship, N. Y.

Writing Aptitude Test — FREE!

THE Newspaper Institute of America offers a free Writing Aptitude Test. Its object is to discover new recruits for the army of men and women who add to their income by fiction and article writing. The Writing Aptitude Test is a simple but expert analysis of your latent ability, your powers of imagination, logic, etc. Not all applicants pass this test. Those who do are qualified to take the famous N. I. A. course based on the *practical* training given by big metropolitan dailies.

This is the New York Copy Desk Method which teaches you to write by writing. You develop your *individual* style instead of trying to copy that of others. Although you work at home, on your own time, you are constantly guided by experienced writers. You "cover" actual assignments such as metropolitan reporters get. It is really fascinating work. Each week you see new progress. In a matter of months you can acquire the coveted "professional" touch. Then you're ready for market with greatly improved chances of making sales.

Mail the Coupon Now

But the first step is to take the FREE Writing Aptitude Test. It requires but a few minutes and costs nothing. So mail the coupon now. Make the first move towards the most enjoyable and profitable occupation—writing for publication! Newspaper Institute of America, One Park Avenue, New York 16, N. Y. (Founded 1925)

VETERANS:- THIS COURSE APPROVED FOR VETERANS' TRAINING

Free

Newspaper Institute of America
One Park Ave., New York 16, N. Y.

Send me, without cost or obligation, your Writing Aptitude Test and further information about writing for profit.

Mr. / Mrs. / Miss .....

Address .....

( ) Check here if you are eligible under the G.I. Bill of Rights.
(All correspondence confidential. No salesman will call on you.) 94-H-660

Copyright 1949, Newspaper Institute of America.

IT WAS MORE THAN "FISHERMAN'S LUCK" WHEN . . .

PADDLE IN HERE QUICK! YOU'RE HEADING FOR SEA!

MY PADDLE'S BROKEN AND I CAN'T SWIM!

CAUGHT IN THE OUTGOING TIDE, BESS BENNETTS IS BEING SWEPT HELPLESSLY THROUGH SHARK INLET TO THE OPEN SEA . . .

I'VE GOT IT!

MAKE IT FAST TO THE BOW!

WHEW! NO STRIPED BASS EVER GAVE ME A FIGHT LIKE THAT

I'M A VERY LUCKY "FISH"

USING EVERY OUNCE OF HIS FISHING SKILL, LOU YOUNG SLOWLY "PLAYS" THE CANOE AND ITS PASSENGER INTO SHOAL WATER . . .

SAW YOU THROUGH THE GLASSES, SIS, BUT I COULDN'T GET HERE SOONER. ARE YOU ALL RIGHT?

YES, RICK. WE'LL MEET YOU AT BAY PIER

DO COME ABOARD

. . . WELL IF YOU DON'T MIND SANDY BOOTS AND SALTY WHISKERS . . .

NO EXCUSES. I'VE GOT SPARE SNEAKS AND A RAZOR, TOO

I'M TAKING YOU UP ON THAT RAZOR

SURE THING. COME BELOW

SAY, THAT'S THE SWEETEST SHAVE I'VE HAD IN YEARS!

THIN GILLETTES ARE PLENTY KEEN AND EASY ON TENDER SKIN

I'M BREAKING CAMP TOMORROW. I'VE A ROOM AT SURF HOUSE

WONDERFUL! WE'RE THERE, TOO

HE'S REALLY HANDSOME

FOR THE QUICKEST, EASIEST SHAVES YOU EVER HAD WITH A LOW-PRICE BLADE, TRY THIN GILLETTES. THEY'RE PLENTY KEEN, FIT YOUR GILLETTE RAZOR PRECISELY, AND PROTECT YOU FROM IRRITATION CAUSED BY MISFIT BLADES.
ASK FOR THIN GILLETTES IN THE CONVENIENT 10-BLADE PACKAGE

10-25¢
4-10¢

NEW TEN-BLADE PACKAGE HAS COMPARTMENT FOR USED BLADES

Knute Savary, the greatest scientist in Earth's history, is sentenced to space by a world whose impending doom he alone sees and can avert!

A NOVEL BY **RICHARD VAUGHAN**

THE EXILE *of the Skies*

CHAPTER I

Betrayal

THE man in the complex and wonderful laboratory—the last word that the science of the twenty-third century A. D. could produce—was alone at his midnight vigil. Around him the lurid Arctean peaks stabbed harshly towards the starlit sky.

Crouched among their arid fields, the enormous buildings that housed many scientific miracles than the world has yet known seemed almost part and parcel of their rugged wastes. Seen from a little distance, it looked no more than another buttress of the loneliest hills. A plane

Copyright, 1933, 1934, by Continental Publications, Inc.

might fly over it and never suspect that here, guarded by invisible and terrible weapons, lay the hidden fastness from which one man was playing for the sole mastery of the world.

The night was starry-still. Looking up Knute Savary could see the countless blazing patterns of distant worlds and suns, gleaming like diamond spear-points through the crystal dome of the laboratory. On the television, rising like a vast silver screen to one side, images formed as he chose under the casual pressure of his hand against one or another button in the vast array on the giant panel below.

At his touch—his whim—an invisible beam, unknown as yet elsewhere on Earth, reached out across oceans or plains, mountains or forests, girdling the earth if need be, to tap some scene thousands of miles away and reconstruct it in every smallest detail.

Close to the television stood a control panel, divided into four parts, each related to a different section of the globe, each closely studded with tiny levers and push buttons. Innocent enough in appearance, this panel was the center of a veritable web of force, arraying thousands of varied and invisible beams or vibrations, capable of flashing destruction to any corner of the Earth.

Now, as Savary's fingers pressed one of the buttons of the television, a scene in far-off China flashed on the screen. At some vast airdrome on the plains of western Mongolia—Chinese Mongolia—now in the heart of the great Mongol state, one of the seven states into which the Earth of 2247 was divided, a feverish activity seemed to be conveying the tension of beings fighting against time and under the threat of destruction.

A great power-generating building rose in the background—one of the few left functioning in the world that, for six days, had been cringing under the last of Knute Savary's might. With an impatient frown, the solitary man contemplated the scene spread before him.

Through an orifice criss-crossed with finely stretched wires that continually hummed with the force of some powerful current, he spoke a few slow words. Their vibrations were caught up and magnified and sped across the carrying air. It was an icy warning to desist without delay from further defensive activities—to dismantle their power house according to orders. It was six days now since first that disembodied voice had flailed across the terror of startled multitudes!

FROM the first its cold recapitulation of its desires and conditions, its warnings on whose heels strode grim object lessons, were as terrifying as though they had come from some distant star. It had traveled across the world, a vast and icy dictum, demanding the destruction of all power plants, the surrender of all weapons of defense and scientific protection, the incarceration of all the world leaders within an area, carefully described, over which he possessed complete control.

City after city had yielded as he demonstrated his might. Now it was only within the sites of the various World Council buildings that defiance still raised its head.

The workers on the far-off Mongolian plain gave no sign of heeding beyond nervous starts as the words of warning lashed across their consciousness. The man in the lonely observatory uttered an irritable exclamation. As one who does, reluctantly, what he deems regrettable but necessary, he laid one hand on a lever set in the nearby wall and pushed it slowly down.

Somewhere far beneath the laboratory—within the underground recesses of the hidden building—an immense machine began to vibrate. A few delicate touches on a small adjuster up above trained its ether-shaking waves on the distant Mongolian field. They would travel around half the world to center and become lethal only at that designated spot.

Turning from the still normal scene,

a Girl Build their Fantastic Life Together!

Knute Savary paced impatiently across the room. A strange uneasiness rode him —some subtle sense of impending danger. His fingers pressed the call bell of the night guards set around the building. Their answering bells told him that all were on duty. Five minutes would suffice them to surround the secret laboratory with a barrage of deadly rays.

He looked up at the skies blazing their age-old messages of light above a with-

KNUTE SAVARY

ering Earth. They were empty of menace. He folded his arms and said aloud to himself, "Another week at the utmost! And the world will yield."

A hundred miles away a dark cylinder of metal slowed the mad speed that was hurling it through the thin and unimpending stratosphere. The tense-lipped men within it began fastening the straps of their parachutes. A woman—a deathly-white woman, with blazing eyes —leaned forward and pointed.

"Beyond those peaks," she said.

Time passed within the hidden laboratory. The constellations swung across the midnight sky. Idly, Knute Savary switched the television finder from scene to scene. It was like an infinite eye, revealing swift sketches of a cowering world.

At last, for the hundredth time, he turned the locator on the great, central World Building but the screen remained blank. Somehow, they had managed to create a power barrage that distorted the finder ray of his own machine. He had not had time yet to discover a way to penetrate it.

Yet he hesitated at the idea of destroying it. Too many great minds—minds that he might yet find use for—sheltered beneath its roof. Impatiently he turned once more to the Mongolian scene. Destruction was becoming a wearisome business.

The airfield flashed back on the screen. A lurid light seemed to play about it, throwing into higher relief the massive and brilliant head of the man who bent above it. The workers had ceased their activity. They were looking upward at a dark and whirling cone of cloud or vapors that seemed to be materializing out of the very air.

As they looked it spread like a widening funnel, a funnel of death and dissolution that swept down upon them in an indescribable chaos of atmospheric frenzy. Men, airships, buildings, were blotted out in a second under the nightmare lashings of tortured, disrupted winds, of atmosphere gone mad beneath the pressure of stratospheric high vibrations.

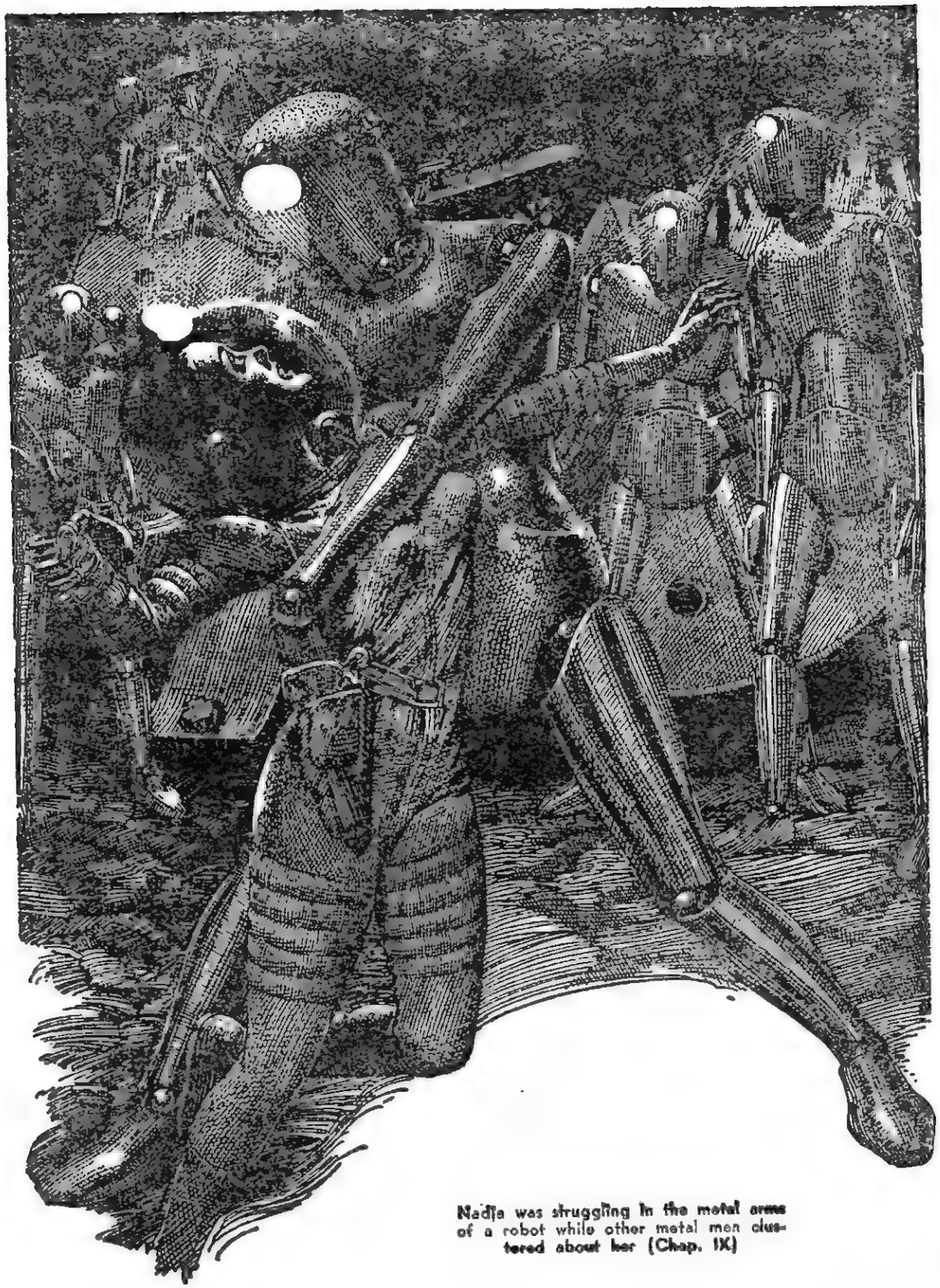
Savary shrugged and pressed down the lever that disconnected the huge machine below. A sudden sound made him swing around.

Ten men—masked against the yellow gas that slowly swirled upward from the bombs they had flung at their feet—faced him across the muzzles of their guns. Behind them the open doorway was filled with the yellow fumes.

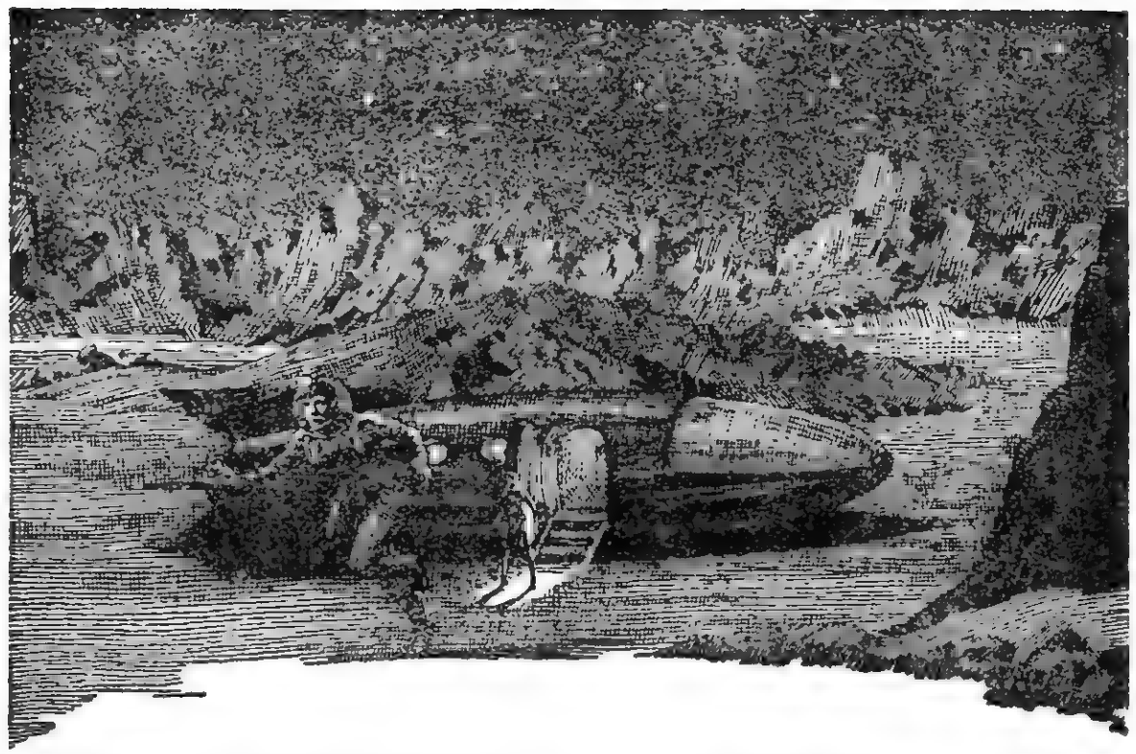
One of them cried out, "Knute Savary! *You*. We had hoped to the last that it wasn't!"

The gas had risen waist high. Savary's hand was on the call bell of the guards. There was no answering

Nadja was struggling in the metal arms of a robot while other metal men clustered about her (Chap. IX)



Nadja was struggling in the metal arms of a robot while other metal men clustered about her (Chap. IX)



bell in return. He folded his arms and smiled disdainfully. The gas was chin high! He spoke pleasantly.

"So the World Council wins. I congratulate you, gentlemen."

He reeled and pitched forward at their feet. The yellow gas that had overpowered the guards of the mighty laboratory at their posts rose slowly to the crystal dome that meshed the diamond light-shafts of the distant stars.

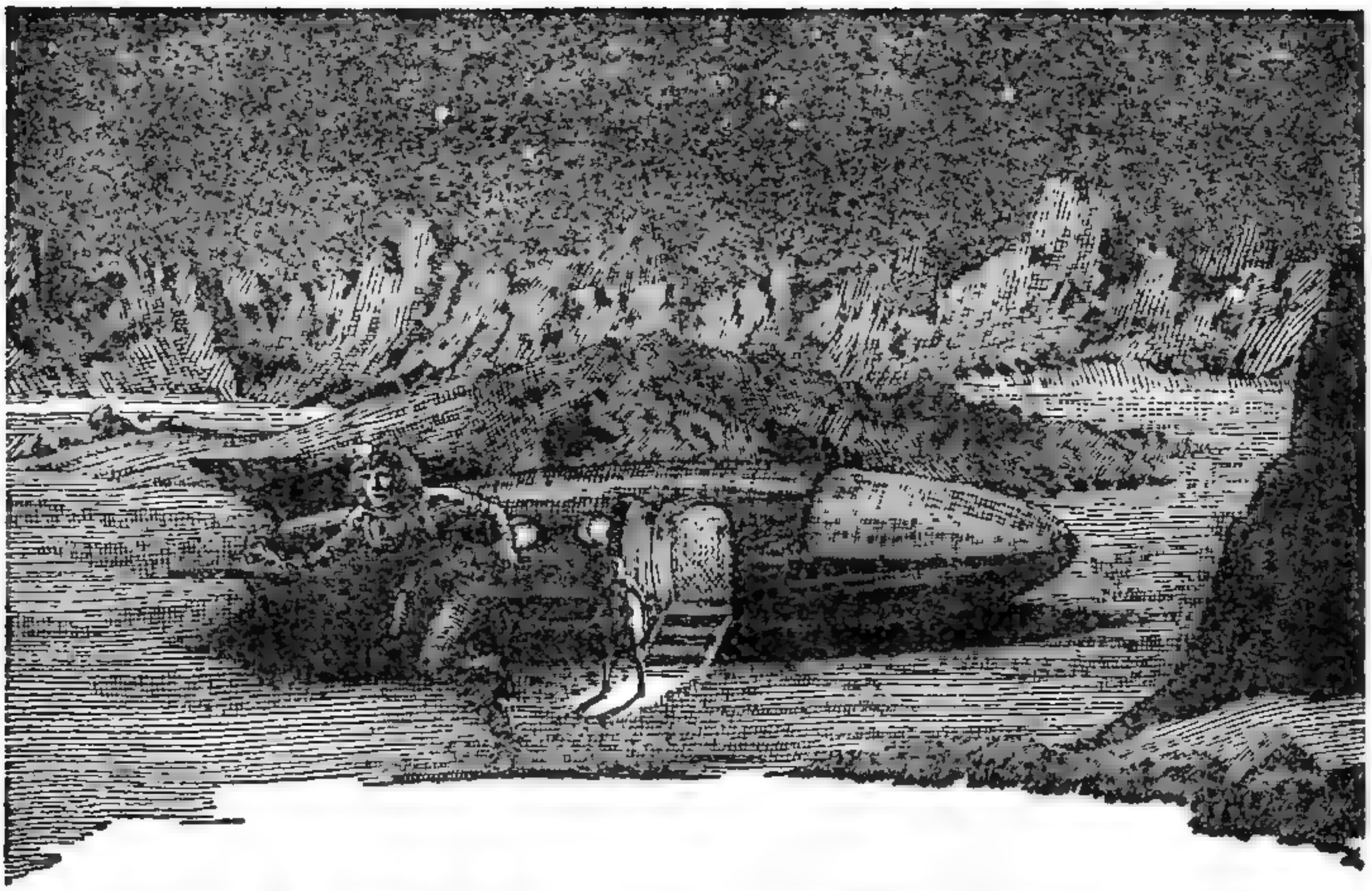
SIX months had passed. The world had mended its scars. Humanity had picked up the many tiny threads of its existence and spun them once more into a complete whole. Its week of bondage had passed into the limbo of unrecoverable emotions, even as the man who had caused it had passed out of their ken. The world, after a brief nightmare, had wakened and resumed its march.

Five months had gone and across the silver crescent-shaped table of their innermost judgment room the leaders of the world looked out somberly, even with awe, at the man who stood for judgment before them.

Inheritor of a vast fortune, Knute Savary had bestowed boon after boon upon the world till, before he was forty, mankind had harnessed nature itself to the service of its will. His mind, a hundred years ahead of its day, had played with scientific conceptions mankind was still incapable of even imagining. The results alone were the gift of a Titan to pigmies. An uncrowned king he had, in one sudden gesture of titanic ambition, made himself the arch-foe of the world. A foe who, even captive, inspired fear.

With folded arms and granite face, a contemptuous amusement playing faintly behind his eyes, Knute Savary faced his judges. Six months ago they had been his friends, even in a sense his inferiors. Now, in a voice rendered flat and colorless by strain, the elderly Chinese president of the Council spoke their indictment from the depths of his ebony chair.

"We are not here to tell you what evil you have wrought on the world nor of the wrongs you have meditated and al-



bell in return. He folded his arms and smiled disdainfully. The gas was chin high! He spoke pleasantly.

"So the World Council wins. I congratulate you, gentlemen."

He reeled and pitched forward at their feet. The yellow gas that had overpowered the guards of the mighty laboratory at their posts rose slowly to the crystal dome that meshed the diamond light-shafts of the distant stars.

SIX months had passed. The world had mended its scars. Humanity had picked up the many tiny threads of its existence and spun them once more into a complete whole. Its week of bondage had passed into the limbo of unrecoverable emotions, even as the man who had caused it had passed out of their ken. The world, after a brief nightmare, had wakened and resumed its march.

Five months had gone and across the silver crescent-shaped table of their innermost judgment room the leaders of the world looked out somberly, even with awe, at the man who stood for judgment before them.

Inheritor of a vast fortune, Knute Savary had bestowed boon after boon upon the world till, before he was forty, mankind had harnessed nature itself to the service of its will. His mind, a hundred years ahead of its day, had played with scientific conceptions mankind was still incapable of even imagining. The results alone were the gift of a Titan to pigmies. An uncrowned king he had, in one sudden gesture of titanic ambition, made himself the arch-foe of the world. A foe who, even captive, inspired fear.

With folded arms and granite face, a contemptuous amusement playing faintly behind his eyes, Knute Savary faced his judges. Six months ago they had been his friends, even in a sense his inferiors. Now, in a voice rendered flat and colorless by strain, the elderly Chinese president of the Council spoke their indictment from the depths of his ebony chair.

"We are not here to tell you what evil you have wrought on the world nor of the wrongs you have meditated and al-

most achieved against your fellow men, Knute Savary," he said slowly. "To your ambitions and overweening pride we could have nothing to say. You who have been the idol of our world have sought to make yourself its tyrant.

"If death has always been the just portion of him who sought the destruction of the liberty of one state alone, what other doom is fit for the being who plotted to enslave a world? The destruction you have wrought, the slaughter of those you sacrificed to your insane lust for hitherto undreamt-of-power, has earned you the execration of the world.

"But we have tried to be just. We have not forgotten all that the civilized world owes to the fruit of your mind, and we feel that the earth must hesitate before inflicting death—however richly earned—on the man who has given it so many priceless boons. Despite ourselves, we feel that the irrevocable destruction of a mind like yours would be a terrible thing. It may be centuries before humanity can conceive such another one.

"But while you remain on Earth our shaken planet can never draw a peaceful breath. Even while the thought of your betrayal of humanity's trust was still fresh in every mind, the very secret of your place of imprisonment had to be kept securely hidden. It was only by burying you in the very bowels of the earth that we could feel secure against the power of your mind, aided by the fidelity of your followers.

"Though we kept you away from the sun forever such a brain as yours, swayed by the insanity we now know lurks there, would keep the recurrence of the danger we have just escaped always imminent. Only one other course lies open to us between death and this perpetual uncertainty, and that is exile—exile from this world, this planet. Banishment into the stellar void.

"The *Victory*, the stellar vessel which you were building with an eye upon the conquest of Mars, once that of our world was assured, is being completed and commissioned after your own plans in your own dockyards. It is moreover being treated with repellum, the alloy you yourself gave us, which, fused with metal and then activated by electricity, renders the metal so repellent to the mysterious chemical properties of the Earth that it is hurled violently away from it into space.

"Thus we shall insure against the possibility of your ever returning to this planet, as the moment your ship arrives within a certain distance of this world the antipathy it possesses for repellum will cause it to fling you away like a stone from a sling. Mars, being of nearly the same chemical substance as Earth, is also preserved from the danger of your presence.

"We are giving you means somewhat to moderate the violence of your departure from the Earth—braking rockets as well as propelling ones. Within the ship we shall place every known apparatus for the preservation of life in the stellar void—atmospheric generators, food in condensed form for a lifetime, machinery for creating water, clothing, weapons, scientific instruments, a library and such other luxuries as we can install.

"In a month from today all will be ready. You are free—if the awfulness of this exile so moves you—to ask for death instead. The Council recognizes the right of any human being to choose death rather than banishment into the pathless void.

"But if you do not . . . and we who have known the old Knute Savary believe that the thought of even the stellar wastes themselves will not overawe him—then a month from this day you shall be placed secretly on board and hurled forth to whatever fate destiny may decree."

HIS voice grew colder, more passionless, as he resumed. "Savary, Chicago lies in ruins, a grave for its many dead, because you made it an object lesson to the world that failed to bow to the first edict you sent out to it. Half of Holland's most fruitful lands lie beneath the sea, because its government defied you. How, from your hidden fastness in the heart of the Andean moun-

tains, you achieved the disintegration of its dykes, you alone know. But not all the discoveries you have given the world can weigh equitably against the destruction those you kept in reserve for its conquest wrought.

"If your hidden retreat had not been betrayed to us we should now be an enslaved planet lying beneath your heel. Only a whim of fate discounted the cleverness of your calculations—a whim that might not interfere another time. You are a danger that no world can afford to harbor. We leave you the outer, unexplored void, the trackless spaces, as your realm. Is the decision just—my one-time friend?"

Seven pairs of eyes probed the steel-gray glance of the prisoner as the Council waited on his words. It was an awful doom—worse, perhaps, than death—but not a muscle stirred on Knute Savary's face. He had played with the ruling of a planet as his goal, with two worlds as his ultimate ambition. Such a man could outface all fates.

Coldly he said, "It is ingenious. Had my plans prospered, I would have made of this world a place a hundredfold better than it now is. But as far as your decision goes, my one-time friends, it is just. May I make a request?"

Savary's eyes played over theirs for a moment.

"First, I offer a bargain. I will give you the secret of the ray that can dissolve earth or rock like butter—the ray I used against the Dutch dykes by means of a stratosphere-ship sent there by night. I will also give you the method of creating atmospheric vibrations of unparalleled intensity and of centering them at any given point, by which the hurricanes I loosed upon Chicago were created. Both these inventions have other and more peaceful uses.

"In exchange, I ask that the contents of my laboratory, as well as the full list of chemicals and apparatus which I shall give you, shall be placed on board the *Victory* to accompany me on my plunge into the void.

"Now, my request. When I am gone those who served me will be harmless to interfere with the existing order of things. Many of them are among the best scientific experts of the world. I hope you will free them of the burden of my deeds. In their own way, they were working for the greater good of this planet."

He paused and added slowly, with an enigmatic smile. "Perhaps for its salvation? A few years from now will tell—but I shall not be here to know. By the way—this is mere curiosity—it was by treachery that you found the secret of my hidden laboratory, was it not? Only someone wholly familiar with its weapons of defense could have led you through the protections I had set around it."

After a brief hesitation, the Chinese president answered, "It was through treachery. But not that of any of the men with you. Someone who had been employed in your laboratories, who had learned there more of your plans than you knew, betrayed them to us."

Savary shrugged. "The human equation is the only one that cannot be absolutely predicted by slide rule and formula. It was regrettable that I could not dispense with it. I do not think that it will worry or betray me much in the future to which you send me."

"Exile is then your choice?"

The prisoner bowed sardonically. The old president said slowly and somberly, "In a month then, at dawn, you shall leave the Earth—and may the starry void have mercy on you, Knute Savary."

At a motion of his hand, guards stepped forward. Doors swung ajar and clanged behind the man who had almost conquered the earth. The old celestial leader sighed heavily.

"We are banishing a man greater than all of us here put together," he said. "Centuries may roll by before the world will know another mind to equal his. It may be that we are hurling the progress and inventions of a hundred years into cosmic space. It is a heavy price to pay for that old word 'liberty'."

Many miles away, a woman, hardly more than a girl, sat staring at a small

bottle of deadly poison, and at the heat-ray gun laid beside it. Nights of haunted remorse and tortured days had barely dimmed the exotic beauty of her mixed Russian and American blood, the beauty that Knute Savary had never noticed.

Behind throbbing temples, the scientific brain that had made her one of Savary's culled employes still fought weakly with the tormented passions of her soul. Under her hand lay the emblazoned thanks and honors from the World Council, sent to her for having saved the world. It was addressed "Nadja Manners."

Across the name she had scrawled "Judas" in shaky letters. Slowly she reached for the gun, then paused. Slowly she seemed to gather herself into some cold hard place of purpose and thought, to congeal even in the heat of her passion and longing for death. A purpose had formed in her mind.

CHAPTER II

Exiled in Space

A RED dawn brooded over the chill mists of an autumn world. It was half an hour before sunrise. From the shroudlike clouds that were already thinning with the approach of day, a rocket plane streaked out of the stratosphere to which it had taken as a final precaution against any attempted rescue of the man it carried. It fell like a plummet toward the gray walls of the enclosure where the greatest spaceship yet made on Earth lay in the slips, ready for launching.

As Savary stepped out from the small steel cylinder, the sides of the mighty space-ship rose, like a towering wall, barely fifty feet from him. The dynamos that were to generate the electrical current necessary to waken the dormant power of the repellum plated on the hull throbbed already.

Some distance off the seven presidents of the Supreme Council stood waiting, faces palely composed and stern in the strange dawn-light. Without the high gray walls, an unwarned world slept peacefully.

As he stepped forward into his first glimpse of sky and earth in six long months, Savary stopped and swept the misty heavens with a thoughtful glance. With folded arms, he stood looking around him at the strange dawn scene.

Gray walls that shut out all view save the still unlit skies—a long cylinder of gleaming silvered hue, faceted like a diamond and finned like some gigantic shark—the armed and tensely watchful guards—the small group of world leaders, gray-faced in the growing light. That was what he saw as he took a last farewell of the earth.

A small door stood open in the flank of the ship. The American president, Lewis Hart, waved toward it. His face was strained. Savary and he had attended the same university. Until six months ago they had been friends. He spoke.

"Would you like to verify the presence on board of all that you requested?"

Savary nodded. He disappeared within the mighty hull. Behind him silence reigned and in the waiting void the rolling Earth turned slowly toward the advancing sunlight. After an interval he emerged. "Everything is there," he said briefly.

The old Chinese president walked up to him and extended a hand that was icy cold and tremulous. Savary touched it impassively. The six others repeated the ceremony in a silence as heavy as lead.

Then Lewis Hart spoke, "Exactly ten minutes after you close that door the electric current will be run through the repellum plates and the braking rockets turned on by means of a switch from without.

"You should be well beyond the moon before your propelling rockets need be called into use. The usual drugs are at hand in the control room to mitigate the effects of acceleration. Good-by and fate favor you."

Savary looked upward with a slow,

sweeping glance. His chest expanded. This would be the last time he would draw the keen sweet air of Earth into his lungs, the last time he would see the dawn clouds flush before the coming of day above his own world. For a moment something strange and hesitating softened the arrogance of Knute Savary's face.

Then his eyes hardened once more. He looked at the men through whose agency he, who should have been master of two planets, would in a few minutes be a wanderer through eternal space. He spoke in a sardonic vein.

"When I am gone," he said, "bid your scientists—such as are left—work hard if they would save the earth from death. This world is doomed—doomed to the same cold death from which so many other worlds have died. You have one generation yet, perhaps two, then it will be too late. I could have saved you—but this world is no longer my world. Bid your little scientists save you if they can."

THE silvery doors clanged behind him. The purr of the dynamos rose. Men sprang to cast off the steel mooring ropes binding the giant hull to earth. At remote levers other men awaited, their eyes on the electric metronome set in the control board before them. The minutes slowly ticked away.

The Chinese president raised his hand as a signal. A gun boomed. The space-ship in its towering speedway seemed to tremble. Then fire flamed and crackled in livid waves over its silvery hull. A mighty, hissing sound—like thousands of serpents let loose—flowed through the convulsed air.

Rockets flamed and roared from the soaring nose of the great cylinder and simultaneously—as though flung from some giant's sling—the space-ship rocked upward, a flash of silver in the first sunbeams. A flash that sped outward and upward and away, and ceased to be as the blue gulf above swallowed it forever in its endless depths.

* * * * *

Within the compact control room at the heart of the great space-ship its solitary occupant lay unconscious in the straps and paddings of his seat as

An enormous claw reached out of the misty, verdant depths and seized the spinning Earthman's form (Chap. XIII)

the vast cylinder roared skyward. After awhile he stirred and lifted himself painfully to loosen the clips that held his straps in place.

The indicator on the board in front of him showed that the braking rockets were working at full strength. The speed computer showed that they had counteracted even the terrible power of the repellum. Acceleration was now within the limits endurable by human flesh and blood.

Leaning forward painfully, Savary took a capsule that had been placed near him in readiness, broke it into his mouth. Before strapping himself in the chair he had taken the drug that Earth's few experiences with space-flying had proved effective in that it produced a torpor that did much to reduce the harmful results of acceleration on the human frame. The capsule that contained its antidote now sent the blood coursing once more through Savary's throbbing and tortured lungs.

In a minute, he found himself able to swing the lever controlling the view-plate downward toward the planet he was leaving at a dizzying speed. For a moment the mirror-framed square of the view-plate flamed blindingly with the untempered sun. Then the great curve of the Earth swam into view, a misty plane of blending colors against which the outlines of a continent—Asia—etched itself weirdly.

The exile stared at the last glimpse of his parent globe. The Pacific ocean sparkled as the warm sun lay across its bosom. A wide band of clouds, probably hundreds of miles of them, draped itself like a scarf across the location of the Isles of Japan.

The Earth dimmed and blended its colors like an opal; its disc seemed to contract, to swim completely into the small dimensions of the view-plate. As he looked the white-capped poles slipped into the picture. Continents blended with the seas.

The world was only another planet, rotating in the airless cosmos, but her call still seemed to reach across the void, plucking an exquisite agony at the heartstrings of her son. He had no knowledge of how long he had bent there, over the dwindling orb that had been his home, that he would never see again.

HOUR after hour the *Victory* hurled itself outward on its goalless voyage. Savary switched off the braking rockets. Soon he would be passing the moon, last outpost of his one-time world. Now all that arrested the eye, as he looked through the view-plate, was the star-beaconed darkness of space, or the unbearable brightness of the sun, flaming amid twisting tentacles of fire to the right of the ship. Even as he shot through the void, the beat of its fierce heat energy was being stored in the reservoirs for solar heat, from which it was distributed to the various mechanical units of the vast and complex craft.

It was Savary himself who had given to the world this greatest of all motive forces—solar power. In conjunction with a new metal, discovered in the previous generation on the moon, it had rendered space-navigating practicable instead of merely possible.

Communication with Mars had been established ten years previously but had not, as yet, become other than a daring adventure. Nevertheless solar heat, as a fuel, had opened the pathways of the skies. It was this man, who now had no other home than these cosmic ways, who had made them free to Man.

The *Victory* represented what was probably a century's advance on the previous type of space-craft. Savary had spent all his great genius in designing it. The hull over which the repellum had been laid and fused was of an elastic metal that had fifteen times the resistance of steel. The impact of a meteor would bend it but it would need a collision with a minor planet to shear through the three thicknesses that formed its protecting wall.

Everything about the ship showed the unparalleled genius of the man whom it was designed to bear to a stellar exile. Savary had calculated that, with a crew of picked men, the *Victory* could have

conquered Mars alone without other help. Would it serve him safely now, as a home and protection in the vast abysses of space?

Within, the ship was evenly divided into three parts. Encased within its triple shell, the heart of the craft held the control room, from which radiated the nerves of its subtle machinery. In the fore and rear parts were the store-rooms and what had originally been intended as quarters for the crew. However, the dividing partitions had been torn out of these latter and a complete laboratory installed, flanked on one side by a workshop for cruder and more mechanical work, on the other by a library and arsenal.

The whole inner part of the vessel was built around a highly magnetized shaft that served to establish a sort of artificial gravity, effective save when the ship was at absolute right angles to a planet. On each side of this central shaft, protected against accidents by the outer rooms already described, were the cells housing the machinery.

Room after room was equipped with specialized parts, each in duplicate in case of accident, and additional storerooms for such vital supplies as the chemicals required for making water and purifying and revitalizing the space-ship's atmosphere, which was thus rendered self-renewable. A small but complete astronomical observatory occupied the nose of the craft, while Savary's own spacious and commodious quarters were placed in the rear.

The space between the inner and second shell of armor surrounding the ship housed the machinery motivating the deadly armament Savary had designed for it. Some of this had remained incomplete, since its secrets were unknown to the World Council, but Savary knew that it would be a simple matter to complete them and surround the *Victory* with a barrier of the most deadly rays.

The Council had spoken truly when it affirmed that, beyond exile and the chances he might encounter in space, no rigors that could be avoided had been imposed upon him. Every conceivable necessity for his comfort had been supplied in quantities sufficient to last a lifetime.

When the moon floated, like a milky agate behind the *Victory*, Savary knew that his last link with Earth was gone. The immensity of the airless skies and burning constellations enwrapped him. Night and day were one.

For long hours he worked in the observatory, making notes of the stellar phenomena continually unrolling before his eyes, taking minute photographic studies of the wonders spread before eyes that must keep the knowledge gleaned from it for themselves alone.

When at last he had charted the skies around him and filed the spectroscope of each flaming sun away for future reference, he turned to the complex wonders of his laboratory. Mars' orbit sped past, her dying world—a red glow afar—melted into the myriad blazes through which the *Victory* sped on her returnless trip.

The man who might have been the ruler of two planets worked through the blazing nights and days—each alike and each unchanging, save in the pattern of the constellations that swung past the glassite roof of the observatory—over the most immense of all his achievements.

DURING his last weeks of imprisonment Knute Savary had charted the days and nights in imagination—the lifetime of days and nights of his future exile. He had thought that loneliness would end by becoming an almost actual presence, a sense of horror, preying on him as it had preyed on men abandoned on desert islands, so that they went mad.

He found now that this sense of loneliness was only an intermittent thing. The silence of the stars, of airless space, beat in day and night against his brain. But the sense of contact with his own kind seemed as yet to linger on within the vessel that bore him upon that mad and flashing flight.

The space-ship, once its course was set, needed but the minimum of navigat-

ing. Past Mars Savary had turned on the propelling rockets till the speed of the vessel was nearly quadrupled and had set its course in the direction it had taken on its leap away from the Earth. Nothing called him to any particular point of the solar system. All time and all space were his and no goal was in either.

One night he awoke sharply from his usual light sleep to find the ship reeling under the impact of ceaseless and implacable blows. He had flung himself down on a couch built into the side of the control room, as he frequently did, and in a bare second he reached the frame of the view-plate and bent over it. A stupendous spectacle met his eyes.

The *Victory* was plowing its way through a dense swarm of meteors, none of them, happily, of any great size. Dust of dead worlds, they rained and pelted against the resilient metal of the space-ship's sides. Lumps of metal, jagged rocks, miniature asteroids no bigger than a house, they careened and swam out of the night toward him till destruction seemed inevitable.

A few days earlier, Savary had removed a dozen or so of the large heat-ray guns with which the *Victory* was equipped, installing in their stead the first results of his toil in laboratory and workshop—an equal number of giant projectors of the disintegrator ray he had used against the Dutch dykes.

As his space-craft reeled under a more vicious assault than had yet occurred he swung the levers controlling them into position and bent interestedly over the view-plate. A unique spectacle flared up before his eyes. For the first time in cosmic records a man-made annihilation wrote its achievement on the vast pages of space.

Destruction had swept itself like a veil around the hurtling ship. The great rays, shortened and broadened to fan-like streamers of barely perceptible light, seemed to reach out like ghostly fingers for the swarming meteors. Rock after hurtling rock glowed and dissolved like butter melting at the touch of flame. As the *Victory* plunged forth from the remaining meteors, he straightened with a brief laugh and switched on the lights.

The interior of the space-ship glowed warm and comfortable, a startling contrast to the airless black without. For the first time, Savary felt a sense of hominess about its metallic walls. Tracing the location of the *Victory* idly on the great wall chart of the skies that hung above the control-panel, he paused as a sudden thought struck him.

For the meteors to have thus assaulted his vessel meant that their substance must have been immune to the effect of the repellum fused into the ship. The repellum itself probably accounted for the fact that these were the first wanderers of the void to approach the aimless voyage through space.

He checked his position more carefully on the chart. Hitherto, he had done so without any particular interest. Now he saw that the present course of the *Victory* would take it within a few days directly across the orbit of the inner asteroids, those lilliputian worlds without number which roll like a river of cosmic pebbles between the inner and outer planets of the solar system.

Perhaps, he told himself, the swarming meteors he had left behind were fragments of this planetoid stream. If so, somewhere amongst them were tiny worlds, immune to repellum, on which he might land. A sudden reluctance to go farther from the planet he had called his swept over Knute Savary as he pondered this.

Why should he not pause, if it were possible, on some larger asteroid? What lay beyond to draw him farther from the tiny disc of Earth? Nothing. The unfinished giants of the solar system seemed at the moment too unlike the planet of his birth to attract his mind.

In any case there were years ahead of him in which to turn in their direction. Of time he had an ample provision. With sudden decision he steered the nose of the space-ship away from its outward path, in a course that would slant it into the asteroid stream in the same direction as their orbital movement around the sun.

SLOWLY the sun had diminished to almost half its size, a fiery beacon that burned unrelentingly in the space-vessel's wake. Day and night followed the arbitrary march of the clock's needle across the figment of the hours. In reality, day and night had no existence out here where night was eternal and the sun a constant burning torch.

He had set his mind on one special problem—a problem seemingly beyond the reach of man. Before the speeding *Victory* had borne him to the edge of the asteroids' orbits its equations lay seemingly solved before him, needing only the test of actual demonstration to establish it as a fact.

One day the powerful telescope of the observatory picked out the moonlike gleam of a small planet from the starry depths ahead. After some calculations Savary turned on the braking rockets to decelerate the frantic speed of his flight.

Soon other luminous dots outlined themselves against the sights of his telescope. On the evening of the second day of deceleration four small worlds—none of them even approaching the moon in size—were visible to the naked eye. Slowly, they drew nearer. Outlines of jagged crests and somber hollows became clear.

Savary settled to a sleepless vigil at the controls.

The first planetoid was drawing close when the man watching her felt a drag in the space-ship's speed as though it were fighting against an actual obstruction. Reduce the power of the braking rockets as he might the drag persisted, became more pronounced.

What was happening was clear to the man at the *Victory's* helm. The small world ahead of him was as hostile to his vessel as the Earth itself. Its size was too slight for it to fling the space-ship away from it as the latter had done. But its small mass was inexorably and slowly repulsing it.

With a frown Savary swung in a wide arc to aim his ship at the farthest of the visible planetoids. No more than a few hours of space-flying separated it from the first. But as he aproached it the same phenomena began to be felt. Once more Knute Savary deflected the course of the arrowy ship.

In the blackness ahead other unseen lilliputian worlds were hurtling toward him. With rear rockets singing, he went to meet them. Surely among all that dust of planets pouring through the skies some would be found whose elements would welcome, and not repulse him.

Not till another two hours had passed did he sight a mass of any considerable size. This was a planetoid about half as large as the moon, around which two satellites—mere pitted lumps of rock no bigger than a Florida Key—circled in a slow march.

Another two hours, and the asteroid filled two thirds of the view-plate with its gleaming disc. As the *Victory* plunged toward it Savary waited tensely for the first indications of antipathy of

[*Turn page*]

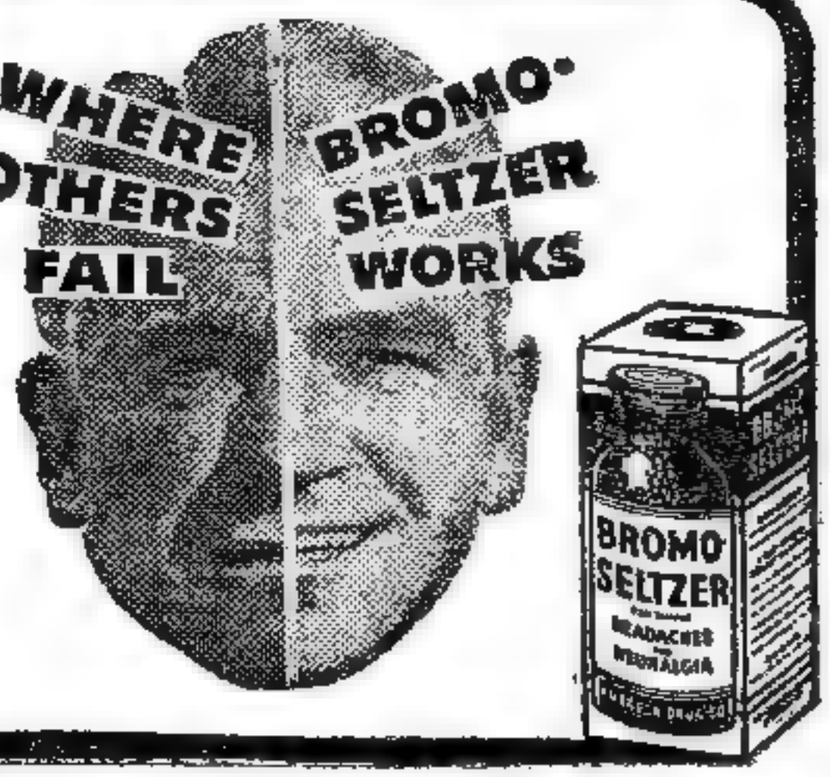
fast HELP for HEADACHE

UPSET STOMACH - JUMPY NERVES

Today more people than ever before use Bromo-Seltzer. Because this time-proved product gives fast help. Not only for headache pain, but also for the upset stomach and jumpy nerves that often go with it.

Quick! Pleasant! Bromo-Seltzer effervesces with split-second action; ready to go to work at once. And it is so refreshing! You must be satisfied or your money back! Caution: Use only as directed.

Get Bromo-Seltzer at your drug store fountain or counter today. It's a product of the Emerson Drug Co. since 1887.



its mass on the homeless ship. But instead a slowly increasing pull began to make itself felt. In the readings of the delicate instruments on the control board gravity began to register.

Slowly the luminous sphere grew and filled the view-plate—an airless world—cold, dead and gleaming as a ghost of the skies. Slowly the *Victory* slipped into her hold and Savary throttled down the rockets to a mere explosive sputtering.

In atmosphere the finlike wings on either side of the space-ship could be used as supports or gliders but on an airless world the rockets were the only means of regulating a landing. Braking with them he brought the space-ship closer and closer to the meteor-scarred and pitted ground. At last, with a seismic jar and crash that shed no echo in that frozen, airless world, the great cylinder came to a dragging rest.

Going into the observatory, Savary swung the covering plates back from the great glassite roof—strong as triple steel but transparent as crystal—that formed its inner ceiling. A scarred lunar scenery met his eyes. Stabbing peaks traced outlines above crevassed valleys.

Between two eroded crests, the shrunken sun glowed like an orange of fire, throwing harsh shadows and untempered light on the air-stripped ground. Above him, the two minuscule moons—small shields of silver swinging athwart the sky—seemed to move at a pace equal to the rotation of their parent globe.

With eyes reddened from lack of sleep Savary looked out awhile on this dead corpse of space. Then, reeling a little from the protracted vigil of the last two days, he gained the nearest couch and fell into a dreamless sleep.

CHAPTER III

An Airless Planetoid

SAVARY woke to the harsh darkness of an airless dawn. Night reigned in bitter iciness over hollows and plain but spear-shafts of sun made beacons of fire of the topmost stabbing peaks. Climbing into the insulated thickness of a space-suit he passed through the successive airlocks of the space-ship and stepped out into the desiccated soil.

A solitary Crusoe of space, he looked upward at the blaze of the untempered stars. The small sun lifted over the jagged horizon and heat and light flamed across the naked world. Odd memories of distant earthly sunrises stirred in the exile's heart. He put them from him to turn and explore this world.

After the slight artificial gravity of the space-ship, the frail attraction of the tiny planetoid presented less difficulty than had he come to it direct from earthly ways. True, a sudden leap flung the solitary explorer an odd fifty feet or so into the void above—but walking was unbelievably pleasant on this half-weightless world. An hour's exploration brought him to the brink of a wide sea bed.

A dust of silver sands still slept in its depths. The worn memories of river beds still led down to its shores. This, Savary saw, had evidently once been a living world and no mere lump of mineral matter torn from the womb of some cosmic death.

Brooding of the past this island of space had known, Savary looked up to where small mountains had lifted vegetation-cloaked brows above some placid sea thousands of years ago. The dwarf moons looked down upon him, an alien on this corpse of the skies.

The next morn he assembled one of the small space-cars—destined to serve as lifeboats in the original purpose of the *Victory*—and equipped it with food and oxygen tanks sufficient for four days. With its small rockets singing their voiceless song of flame it sped over the surface of the asteroid, barely skimming the higher peaks of the low mountain ranges.

In four hours, he had circled the tiny globe. He calculated that it was roughly about half the circumference of the moon. Its period of rotation took a little over nine hours and its tiny satellites

completed their own orbits in close to the same time, so that they were almost as fixed as the mountain tops in the parent-world's sky.

He found on the other side of the one-time sea land spread out in the crevassed and desiccated remains of a plain. A broad valley widened between low hills till suddenly it became an amphitheater set among the distant foothills of still more distant mountains and cleft by the worn bed of a broad stream. Here a vast and ordered array of crumbled debris and dust-covered hummocks arrested his eye.

Mooring his rocket boat to a vast, cleft rock, he stepped out and approached it on foot. This, he found, was precarious work. The thick, almost impalpable dust of centuries lay many feet thick at places. At others, the worn backbone of the under rocks rose like a leviathan's ribs.

Of no known material or architecture the scattered ruins before him had clearly been created by some form or other of intelligent life. Buttresses reared from the silting sands. The caved-in roofs of buried dwellings opened debris-filled gaps under his feet. There a many-planed arch writhed free of choking dust. Here the upper half of a mighty doorway opened like a gaping mouth before Savary's footsteps. Sand filled it like a petrified flood.

Drawing forth his disintegrator-ray tube—a small edition of the ones he had used against the meteor swarm—he trained the weakest of its vibrations on the choking dust. Like water turning to steam it melted into nothingness and a crumbled flight of steps appeared beneath it.

Switching on the forehead lamp that all space-suits carried, the Terrestrial stepped gingerly down into its clutches. For hours he seemed to descend into the very bowels of this corpselike world. After awhile the material of which the passageway and floors were built became more discernible and less corroded by time.

Scratching it with a knife. Savary saw that it was a sort of green metal, of so fine a grain as to seem like glass. Turning his disintegrator on it he was astounded to see the smooth surface remain unscarred. This was some substance not only unknown to Earth but of a molecular composition different from any Terrestrial element.

A metal of this order—if metal it was—could outlast even time itself. Even stelumin, from which the hull of the *Victory* had been made, could not compare in tensile strength with this green substance left as a monument to a vanished race of intelligent beings.

DESCENDING deeper still within the airless tunnel Savary found himself at last in a vast hall whose farther confines lay unrevealed by the rays of his lamp. Here even the dust of a million years had not found entrance.

Pillars of strange fluted design lost themselves in impenetrable darkness. Arched doors opened on every side into winding passages. Faded hues gleamed from the sculptured walls. Flashing his light along the nearest pillars, Savary saw that the carvings there seemed to be in the likeness of almost-obliterated figures. These gave the startling impression of earthlike silhouettes.

Peering closer, the exile from Earth saw that the refaced bas-reliefs possessed the outlines, at least, of human beings. One—a more than usually clear outline of a feminine-looking bust and head—had a haunting profile with strange yet human pointed lips, an oddly curved and flattened nose, shoulders of almost birdlike delicacy.

Later, as he skimmed once more above the desert wastes of the dead world, he imagined how those plains and mountains must have looked to the beings—so like men—who had built the mighty city he had just left and breathed the air that had seeped away into the void. Could he bring back to them once more the verdure and life that had left them a thousand centuries before?

Here was the test his greatest of all achievements needed. He would make this dead planetoid his challenge to the immense and inexorable forces of cos-

mic space. Out of the icy airlessness of its aeons of sleep, he would lift it into the glow and color and warmth of pulsing life. Beside so vast an achievement, the conquest of Earth itself would appear a small thing.

When the *Victory* rose in front of him, a darkly luminous cylinder of alien metal above the saw-toothed hills, his strong elation subsided. into terrible loneliness. Across the faceted hull of his space-vessel the spear-point of light that was Earth flashed its vain call across the void. Now that an impassable abyss sundered him from his fair green world, now that it was too late to make amends, bitter horror possessed him at the doom to which he had left the planet of his birth.

Slowly he sank his rocket boat to a shoulder of rock above the space-ship. Stepping out, he stood on an uplifted plain, looking out at that distant gleaming pinprick and felt the vain assaults of a poignant remorse shake even the Olympian coldness of his mind.

While he gave air once more to this dead dwarf world the doom which had killed it would be stealing over his own fair sphere. A doom he alone of all men on Earth had foreseen and sought a remedy for—the slow leakage of the vital air into the surrounding void. Even as it had destroyed the moon, as it was now destroying the desiccated wastes of Mars, as it had destroyed, in some dim past, this small world he stood on—so was it bringing its cosmic airless death to Earth.

Bitterly he wished that he could send across the void the warning and the saving knowledge he had failed to speak clearly of on the morn of his exile from Earth. Across the void Earth beckoned to him with a strange and powerful call, and the exile felt his whole being answering her vainly as he stood in the most awful solitude man had ever invented for man.

It was the impossible, the unbelievable that tore him from his abstraction. A human cry was shrilling frantically through the radio-receiver in his helmet!

At his feet on the plateau, between the rocky peak where he stood and the space-ship, a figure—a moving, living shape in a space-suit—was running wildly as though pursued across the crevassed ground. As he looked, the figure stumbled and fell and something stranger than itself—something as invisible yet perceptible as the ghostly smoke of dry wood—hovered for a moment above it, then blotted it from view.

SAVARY'S senses tingled with some wireless impression of menace and alien danger. For half a second, the figure in the space-suit seemed to writhe and struggle from its almost-invisible foe's embrace. But even as Savary leaped toward it it collapsed and lay as though dead beneath the obscuring folds of the something with which it had fought.

Savary's leap hurled him across fifty feet of space into the radius of the invisible *thing*. As the impetus of his spring slowed to a last few running steps he felt a slight resistance as of something elastic break the violence of his arrival.

Immediately, an intense and sickening cold struck through the walls of his space-suit. It was as though cold itself, the ultimate of all cold, had taken a body. Yet cold that could be felt through the insulations of a suit built to defy the terrific cold of space was almost past the imaginative capacities of man.

Almost by instinct, Savary's numbing hand pressed down on the lever of his heat-gun. Its fiery ray sprang out in a deadly fan. Around him, the appalling cold shrank and released him. A vague shadowless swirling eddied through the airless night. Then the sense of withdrawal was complete.

The thing, whatever it was—vapor unsentient and will-less, or malign and living matter—was no more. Only the black emptiness of space pressed down upon Savary and the unconscious figure at his feet. As he bent over it a human face glimmered through the glassite helmet's front. Still breathing, an Earth-woman lay on the ground at his feet.

In the control-room, he applied restoratives. After awhile, her eyelids fluttered and opened. Eyes changed from a look of questioning blankness to one of shrinking fear looked up into his. Savary stood staring down, frowning at the suddenly masked face. A teasing sense of familiarity probed at his mind.

Suddenly he remembered the brilliant young Russian scientist who had been among his assistants in the astronomical department of the vast complex laboratories over which he had ruled. She had been, he remembered, the only woman he had ever taken on his staff, though women scientists abounded in his modern world.

He had generally held that they were emotionally undependable and therefore had no place in the domains of pure reason, where science had to be tracked down. Nadja Manners had been an exception. The brilliancy of her record had been too outstanding to overlook.

Now, perplexed and feeling his way through a maze of various and unfamiliar emotions, he wondered what reason had driven her to share his exile. If it was faithfulness, it was faithfulness beyond even the fanatic devotion he had all his life commanded from those who served him.

But even as the words of appreciation, of gratitude, rose to his lips they congealed there. Swiftly his lightning intuition assembled the missing pieces of the puzzle he had played with on Earth during the long watches of his imprisonment. He spoke with a cold, light sarcasm.

"Remorse, extravagantly manifested, is a woman's luxury. When I wondered who had betrayed me I should have remembered that I had committed the folly of taking a woman on my staff. Was it to make amends or to ease your conscience —a feminine ailment also—that you condemned yourself to eternal exile in my company—and without consulting me?"

In the pitiless silence the woman dragged herself to her shaking feet. She leaned against the wall. Her beauty had a ghostlike quality. Haggard and worn and cool, she was like something that has passed beyond all passion and feeling.

"You just saved my life," she said tonelessly. "Perhaps for either of us such an act is really a disservice. Nevertheless I am grateful."

Savary looked at her curiously. She was very young still and for her courage at least he could have nothing but admiration. He poured another dose of restorative and held it out to her.

"Any other human being in this solitude is valuable," he said. "I wonder why you betrayed me?"

A faint smile played across her pallid lips. "Because I was in love with you and women were beneath your interests. Hate and love have thin lines of demarcation. There was a scientist within your secret laboratory who loved me and I used him to learn of your plans."

"*Love!*" Savary smiled contemptuously. "How did you get on board?"

"You probably forget that I helped design the astronomical observatory of this ship. When I learned that the *Victory* was being completed I guessed the purpose and it was easy to slip down in a parachute suit from a plane driven over the yards in the dead of night.

"Once within the ship it was child's play to find a hiding place in one of the storerooms already stocked. During the flight I sallied out only when you slept. Today, when your absence prolonged itself, I grew anxious and found a spacesuit with the intention of going in search of you.

"I had hardly left the ship when I felt the sensation of being watched. Then—although I was facing the sun—I saw it disappear and had the feeling that some malign presence was drawing near me. I turned back to run to the ship and —the rest you probably saw. What do you think *it* was?"

"Evidently a being that exists without air. We have always speculated as to the possible existence of such things. It is probably only perceptible to us through some of our less recognized senses. Clearly it is beyond the range of our vision though it is opaque to light. It may deflect light in a manner unsuited

to the capacities of our retina—probably in a sharp curve or angle."

"But I saw it," the woman protested. "It was at least partly visible."

HE shook his head. "That was probably no more than the collaboration of your other senses, making the creature almost visible to them, just like a smell may almost conjure an image to the view."

The girl shuddered at the memory of the icy clutch from which she had just escaped. Weakly she lay back against the cushions of the couch.

It was this frail creature before him who had wrecked his Titanic plans and condemned him to an exile whose bitterness he had only just tasted. But the thought that he himself had betrayed more than one man through the bitter silence he had kept—a silence through which the world itself must die unless he found a means of bridging the immense gulf between them—softened the harshness of his judgment of her.

He had been unaware of her love for him—it would not have interested him in any case, though she had been on Earth a lovely brilliant being with a savage beauty that belied the highly civilized capacities of her mind. As an intellect he had considered her worth using. He was scarcely astonished now that she should have been the one to destroy him.

Nevertheless, the presence of another human being here in his exile was an invaluable solace to that inhuman loneliness that had pressed upon him out there under the icy stars. What she had said was just. His scientific experiments would be facilitated by a helping hand. The very relief of speech would prove a safety valve for his mind.

"You will be useful," he said coldly. "At least you are a scientist yourself. Together we should accomplish some things that would have been hard for me to execute alone. I owe you no gratitude for having come with me, though I have a certain appreciation of your courage. But I admit that I have something to gain from your presence, though that of a man would have been more useful."

The girl stood up and walked across the room to the view-plate. Her brilliant eyes burned but her voice was even more emotionless than the man's. "You will find me as useful as a man," she said. "I am very strong, and the next time I go forth upon this world I will see to it that I am armed so as to meet dangers without depending on you. What if there are many of these *things* on this asteroid?"

Savary frowned in thought.

"We could fight them more easily if we could see them. I wonder—I have an idea. Tonight I will work on it. Choose yourself rooms in the forepart of the ship. You will find there enough clothing for you as well as myself. You can probably adapt them to your size without much expenditure of energy."

He disappeared into his laboratory. When he emerged the airless night had settled down upon the lilliputian world. Soft lights glowed in the spacious control room and warm food steamed on a side table. During his solitary flight Savary had lived on the food tablets.

The *Victory*, however, was equipped with condensed provisions of more appetizing food and of these Nadja had, womanlikc, made a savory meal whose aroma and taste made the interior of the space-ship seem suddenly a more homelike place. Her impersonal manner pleased him. Over the meal he told her of his discovery of the ancient city.

"Tomorrow we can explore it further," he said. "And by then, I may have something made that will make it possible for us to see any creature such as that which attacked you today—if there are others about."

CHAPTER IV

The Ancient Race of Speira

THE next morning, when Nadja Manners came into the control room, she found Savary holding two pairs of

odd-looking spectacles in his hands. He handed one of them over to her. They were made of some new transparent substance, a crystal darkly rose on the surface, yet with an effect of other underlying colors beneath, as though many sheets of thin, vari-hued crystal had been superimposed.

The upper part of each spectacle was transparent and of ordinary glass but on looking through the lower half one got the strange impression of gazing through a kaleidoscope into a realm where strange shapes and colors moved with shadowy vagueness. Although sufficiently transparent to filter light in distorted fashion it was impossible to perceive any of the objects in the room when looking through it.

"It will have to be proved by use, of course," Savary said. "But if the creature who attacked you owes its invisibility to the causes I imagine, this little bit of crystal should help us to see it. The light rays reflected back from the objects around us do not penetrate it—not because it is not transparent enough, but because it is constructed so as to transmit and straighten only the rays that are distorted or bent along certain defined angles.

"It will probably not give a full view of the creature we dealt with yesterday. If its dimensions are too large we will only perceive the center of it, for the glass can only catch those rays whose deflection is not too far removed from the normal range of the human eyes.

"To make ordinary visibility possible I have made the upper portion of the spectacles of ordinary glass and the lower of this substance—which by the way is a composite of the finest lunar rock crystal, superimposed in thin layers and containing some of the principles of the prism."

"What makes the effect of superimposed swimming colors, as though you were looking into great depths?" the girl asked curiously as she handled the strange substance.

"Imprisoned gases. You have seen a stick's reflection distorted under water? The effect of these condensed gases held between the crystal sheets is distantly related to this distortion."

The small red sun was approaching the horizon when they drew near the half-buried city of the dead. The shape shadows of an airless world were lengthening across the dust-buried plains and as they reached the immense half-cleared doorway Savary had discovered they switched on their forehead lamps.

Within, the unchanging darkness of a million years hung like a palpable presence. The great hall seemed like a tomb of ghosts. Leaving Nadja to examine in detail the carvings and hieroglyphs on pillars and walls, Savary started to use his disintegrator carefully on the dust-choked doorways. Behind them inky passageways stretched out under the silted earth. Suddenly his radio-phone hummed with a sharp exclamation from the girl.

"There are ideographs interspersed with conventional signs," she cried out. "Writing that has crystallized into more or less of an imaged form. I have already made out the conventional sign for 'death.' It should be a fairly simple matter to decipher the messages they have left behind."

Savary returned to examine with her the various writings carved along the bases of the larger pillars. In their search for more they came upon a majestic arched door set at the farthest end of the vast hall, on whose great double panels some time-enduring inscription had been carved in letters at least a foot in height.

Nadja made a careful copy of them but their subsequent efforts to open the massive portals were vain. After expending some fruitless energy Savary resorted to his disintegrator ray, but with equal unsuccess. The Terrestrial switched off the ray and surveyed the mighty portals frowningly.

"If this is metal, it must have been rendered malleable in some manner or other," he said. "It is strange that with a mineral composition so different from that of Earth this small world should have apparently produced beings so closely resembling us. One wonders if

the human form is the one most fitted to survive in any evolutionary struggle—but that could hardly be! However, the problem before us now is the opening of this door."

"We might try the heat-ray," the girl said. She turned hers on. The surface of the door glowed with almost unendurable brilliance but remained intact.

SAVARY spoke. "Turn it on the spot where the disintegrator ray touched it." She obeyed.

This time the metal glowed red instead of golden. When she switched it off, a perceptible indentation of the surface was apparent. Savary played his disintegrator over a wider area, bidding Nadja sweep the heat-ray in its wake. Gashes of molten light appeared and deepened and spread. After a half hour's work, a wide cut appeared, spreading from the top to the bottom of one portal, and a few minutes' work on the hinges allowed the whole side panel to fall away with a resounding and oddly musical clang.

Before them a broad and inky hallway stretched in a steep downward slope. As their feet scuffed the immense blocks of stone that paved it Nadja cried out in admiration. Where the blackened deposits of time had been rubbed away, it showed the color of copper allied with a semi-translucency comparable only to the moonstone or opal. Savary bent to examine it, then shrugged.

"There was evidently no more of this left when the sun created our world and that of Mars. The ivory stone of Mars is lovely but this is infinitely beyond it. It may have been the equivalent of gold on this asteroid."

They were descending ever deeper into the planetoid's cold heart. Endlessly the brilliance of their lamps walked before them through a world whose pulse had ceased to beat planetary ages before Earth had spawned Man.

Suddenly, Savary dimmed the lights of his headlamp. Ahead of them a radiance, faint and fluorescent and unreal, played against the walls and floor about them. The portal of another door—a door of the same beautiful substance as the broad-flagged floor—reared before them but some earthquake or cosmic tremor had rent the panels apart. Through the aperture a faint pale radiance glowed and played—had glowed and played for cosmic aeons!

They passed through the broken portals into a vast room fashioned like a smoothly rounded inverted dome, whose walls and ceiling glowed and pulsed with an eerie silver radiance through which vague restless eddies of shadowy crimson seemed to flow.

Against the glowing walls great niches of bronze opa-stone, each holding a wizened mummied shape, showed that this room was no more than an immense tomb. Preserved by the airlessness of their world through the immense sequence of the passing years they leaned back with folded hands and closed eyelids as though they merely slept.

Small old men of fairylike proportions, beardless, wrinkled and dried up, frozen rigid by the unnamable cold of space, each richly clad in garments of some corroded metallic tissue, were waiting—like Barbarossa's knights—the trumpet of some cosmic resurrection.

In the hands of one, who seemed to be presiding over the others, a copper-colored scroll rested, untouched by time. Gently Savary disengaged it and placed it in the pocket of his space-suit. He examined the ancient mummied figures. They were of a markedly human type. Small—the tallest may have been five feet in life—and of a light-boned build of an oddly birdlike quality. The faces seemed to have been small-nosed and rather strong of brow and lips. Their hands possessed two thumbs and must have been of a unique dexterity in life.

Nadja spoke slowly. "They may have been of an intelligence superior to ours. Man is supposed to have won over other animals in the evolutionary race because he possessed a thumb. I wonder what effect the possession of two of them may have had on the mental development of this race."

"That roll of bronze metal paper may tell us—if we can decipher it," Savary answered slowly. "Let us get back to the ship and try to read it."

TURNING reluctantly, they went from the glowing tomb. As they retraced their steps through the long sloping tunnel, Nadja queried, "What could that light originate from? It must have glowed there for endless centuries."

"Probably the effulgence caused by some slow disintegration of matter—a matter unknown to us on Earth, whose laws of disintegration are different from ours," Savory said.

They regained the space-ship without hesitation. Savary decreed that food and sleep must precede the tackling of the hieroglyphs on the records they had gathered. He had little doubt of their being able to do so.

The first day's work showed him that Nadja Manners was practically as efficient as himself in the art of deciphering. Through some strange alchemy of necessity the man and woman, so definitely stranded in the immensities of space, swung into an impersonal, harmonious enough collaboration. Confronted with the inevitable, Savary accepted it with a shrug.

Like an automaton self-fitted to the needs of his mind, Nadja Manners was content to be what he chose to have her. The passionate atonement that had driven her out into the void to share his fate, whatever it might be, had drained all thought of self from her. Contained and quiet, she stood ready to be whatever he needed most.

Realizing that she was fully as capable as himself where the art of ideograph reading was concerned, Savary promptly left this lesser matter in her hands while he began a series of preparations within his laboratory, whose complexities were almost beyond a layman's comprehension.

Delving continually into the store of raw materials he had had placed on board the space-ship, he spent sleepless hours within his workshop or laboratory. On the third of the little planets, brief days after their return from the dead city, Nadja called him forth.

"I think I have the sound effects of their alphabet. The ideographs were, of course, much easier. If we both work at the translation of the documents we should be able to read them by tomorrow."

Within twenty-four hours the translations lay before them. The ideographs and writing on the pillars of the first hall proved to be formal eulogies of a one time live world. On one the inscription read:

> This is Speira . . . the lucky child of the sun. Give thanks ye who have been born on her happy sphere."

On the other—Nadja had brought back impressions of only two—they read:

> Of the five sister planets, Speira is the favored. Our scientists have looked at Marinoe, which lies outward, and seen there nothing but waters or vapors of waters. They have looked at Sakka and Lydda—sister planets, circling each other as though strung on one slender rod—and found but arid, airless wastes. They have looked at Reinos the Luminous, which follows our orbit, but always a little in our rear, and seen but a glowing chaos of unresolved gases. We only have all blessings for which give gratitude.

The frequent sun had once more set behind its bleak, dark hills. Savary set the first two documents aside and went through the stelumin-walled passages to the glassite-enclosed observatory. Slipping back the shutters of metal that covered its roof, he swung the powerful telescope outward toward the blazing skies. After a few minutes he arose and bent over the stellar charts spread out on a nearby table.

"'Marinoe, which lies outward'," he quoted, as he made a mark. "What are a few million years to the orbit of a world?"

SWINGING the telescope once more so that it ranged the heavens slowly, he finally located Reinos and marked its position likewise on the chart. A futile search convinced him that Sakka and Lydda were either below the horizon at the moment or else had vanished in some spacial catastrophe in the past.

Meanwhile, there was still the copper roll to read. It had been impossible to gather more than tantalizing scraps of its purport while he translated it. Spreading the pages before him, when he was once more back in the warmth and light of the control room, he began to read in a low steady voice:

"We of Speira—once called the lucky planet and now facing the ultimate doom that awaits all worlds—do here record the final testament and story of our race in the slight hope that it may someday be found, perhaps, by creatures akin to us from our sister planets.

"In the season Twenty-seven of the Seven Thousandth cycle our scientists first noticed the increasing thinness of our atmosphere and gave warning of our doom. Though we searched frantically for two generations for a means of averting fate, in the One Hundred Forty-seventh season of the Seven Thousandth cycle we realized that our doom had been set on us by the cosmic gods.

"With two-thirds of her people already dead from the ills brought upon us by the terrible rarefaction of our atmosphere Speira was facing her death-throes. Then it was—shortly after we knew that our end had come—that the unhappy remnants of our once-favored race began to fall victims to the shadowy unseen terrors, come, we believe, from bleak Sakka, whose very touch can freeze the life from any creature of flesh and blood.

"With the thinning air they came. Ever more numerous and horror-compelling—*things* that the eye saw only as a reflection, that no weapons seemed to touch. Therefore, those of us who remain—pitiful and small is our number—have fled to the depths of our world, burrowing like the mole where the air still clings closest and densest, in the ancient temple-halls our forebears built for their gods. Here we will die.

"Yet we are not dead, and before we die, we will venture one more defiance at the bitter cosmic fate which overwhelms us. Perchance in some distant future there shall come beings to this air-stripped world, conquerors of the unconquered void. Perhaps nature—in that dim day—may turn and reverse her edict and give to Speira once more, the beneficent atmosphere that nurtures life!

"For that slight chance we shall prepare, in the frail hope that our race may not wholly, and forever, perish. Oh, ye who may never find this—for well we know how mad is our dream, how mad our defiance of fate—look on those who watch over this writing and know that they are dead.

"But when you come to the sleeping place of youth, to the tomb of Speira's hope, know that what you see is not death but the unchanging ageless cataleptic state over which the centuries may roll and airless aeons pass without taking toll.

"If Speira can once again support organic life, wake them and let our one last hope come true across the infinite reaches of time. Let our lordly race live once more upon the soil that bred it! Join hands with us who are no more than dreams of a dead day, with us who have sought to hurl with our puny hands an ultimate defiance at Time!

"Help us, oh stranger, once more to breathe and be! Meanwhile we die! But beneath us, unsentient and at peace, Speira still lives! Salute!"

Savary laid down the translated pages in a tense silence. Across thousands of years their message had come—direct as a straight-flying arrow—to the hand for which they had been prepared. Time dwindled and grew ineffective under the thought of the vast and conquered vista thus spanned by organic minds.

Walking to the glassite-roofed observatory, he looked out once more at the enigmatic, wheeling heavens, at the blaze of unchanging stars.

The barren reaches of the Speiran plateau on which his ship reposed lay like a sinister footnote to the tale he had just read.

Swinging on Nadja Manners, who had followed him silently, he said in a low, tense voice, "Speira shall live again!"

CHAPTER V

Invisible Horrors

THE moment had come when the girl who was his fellow exile must be allowed to share the knowledge of the gigantic plans Savary had harbored and perfected in the weeks of his rush through space. Leaning back against the cushions of one of the broad low seats, he marshaled the array of facts and incidents which lay back of them.

Savary told of his first suspicions that all was not well within the earth's atmosphere—of tests which convinced him that the altitude of the navigable stratosphere had appreciably lowered during the previous years and that the rarefaction of the air of the highest mountain summits had increased alarmingly since the preceding generation.

Pushing his studies still further, in ways that were possible only to the richest man and the most brilliant scientist on Earth, he reached the conclusion that the real cause of all planetary death was the suddenly hastened leakage of its atmosphere into the surrounding void. That the fingers of doom were already brushing the unsuspecting Earth, he could hardly doubt.

Sardonically he remarked that it was his realization of how slow and tedious any steps to save Earth—if such a thing were possible—would be, that had served as one more spur toward the Titanic bid for absolute monarchy of their world which had failed. Drawing a lump of mineral matter from his pocket, he rolled it over to her.

"That lump of metal helped to give me the key to the vast sickness of which the Earth is already dying," he said, "but I will come to that later on. First, I must tell you that the loss of our atmosphere into space is not accurately a leakage or actual disappearance.

"It is simply a slow spreading of the atmospheric envelope about a nucleus that has lost its density. Ultimately it may become so thin as to be completely absorbed by space—but I doubt it, for the mass of the globe it belongs to must continue to hold and bind it vaguely to its central focus while the laws of the attraction of matter for matter remain.

"I am convinced that there is still air upon the moon—though I had not the time to prove it—also that airless planets are no more than worlds whose atmosphere has spread away from them till a near vacuum exists upon their surface. I am convinced that there is still air upon this little asteroid and I intend to prove it by drawing her envelope of air back around her once more."

"Which means that you know the reasons for this planetary death?" the girl scientist cried. Savary nodded.

"I think I do. Loss of vitality of a world's magnetic field can be roughly given as its explanation. Gravity and magnetism are, we now know, twin prongs of the same force—complementary laws. But it is only lately that I have discovered that the former can exist after the latter is destroyed.

"What causes this failure of magnetic attraction? A loss so definitely distinct from the simpler attraction of matter—even on long dead planets like the moon and this little world, men may walk under the influence of gravity, although the magnetic field of the planet has been drained almost dry—was harder to trace.

"I am still not positive as to certain formulae concerning the stimulus the radiation of matter fathers under the influence of cosmic ray bombardment. I am convinced, however, that at a certain point in the evolution of a world this radiation is stimulated or sped up to a constantly increasing rate.

"Scientists have given an infinite slowness to their conception of the radiation matter. They have erred as to the uniformity of its progression. That small lump of metal, highly magnetized and placed on the barren soil of the moon, unprotected from the direct influence of the cosmic rays, lost its magnetic properties one thousand four hundred times as fast as another piece set

on the roof of my laboratory on Earth.

"As the atmosphere thins the radiations that are bleeding our planet increase at amazing ratios. Inside our generation the effects of this situation will begin to be felt—by scientists at least. Within another two or three generations Earth will be close to her doom."

NADJA sprang to her feet and looked at him with haunted eyes. "And even if your experiment here proves successful there is nothing we can do to save her—*nothing!* When they thrust you forth into the void they flung away the one man who could save Earth! If Earth perishes it will be my fault—my fault alone!"

Savary spoke with unwonted emotion. "If Earth dies, I alone must bear the blame. I could have spoken before I left. I did not. Since I have come here I have had time to regret it. In any case, your concern assumes that the experiment I am going to attempt on this planetoid will be a success—an uncertain hypothesis.

"If I should return life to a defunct world it should not be impossible to solve the simpler problem of communicating with Earth across even the barrier of interplanetary space. And other scientists there may reach the same solution in time as I have. Tomorrow the real work will start."

For a month they immersed themselves in toil—unremitting and protracted, which only the weightlessness of their tiny world rendered possible. Savary learned to appreciate Nadja Manners as he would another man. He found her a tireless uncomplaining assistant, almost a part of himself, like an extra arm or hand, so quick and trained was her every response to his demands.

For a month they met no sign of such icy beings as the ancient Speirans mentioned, of the ghostly presence that had almost slain Nadja. The spectacles Savary had made in expectation of their coming remained always ready within the helmets of their space-suits. In the silence of the dead world they toiled—two puny beings doing the work of fifty.

Exploring the asteroid in his rocket-boat, Savary had finally located one of the ancient mines from which had come, aeons before, the strange, green metal that the Speirans had used. By combining a heat-ray with an inner pencil of the disintegrator-beam—the first forming a sort of tubing of flame around the more deadly ray—he found a method that allowed them to mine and shape the practically indestructible metal.

From it green girders and braces, slender heat-welded beams and broad bases, were finally shaped and transported by the aid of rocket boats to the side of the first of Savary's "revitalizers." This was on the plateau of the *Victory's* landing place.

From the storerooms of the ship ingots of stelumin and of the old-fashioned but still useful compressed steel were brought into service till at last the strange creation took on body and form. Lying like a shallow basin, face upward to the starlit sky, a great bowl of brilliantly polished stelumin formed a reflector of such strength that the sun itself seemed to be pouring in and out of it at noonday.

On higher girders on either side, smaller mirrors whirled and spun under the driving power of stored solar energy drawn from one of the smaller replacement engines with which the Victory had been abundantly equipped. Hourly these blazed high above the ship and the stabbing black peaks, throbbing with the might of heat and light that they caught and imprisoned.

It had a strange enough appearance, this machine that should revitalize a world. Looking at it completed, Nadja wondered how such a creation of complex metal could have emerged from the hands of two such human pigmies as themselves. Only the leashed powers and knowledge at Savary's command had indeed made it possible.

AS she stood considering the vast web of mirrors and steel Knute Savary was examining with unrelenting minuteness each cranny and corner of his immense mental child. In his

grotesque space-suit he looked like some giant spider crawling over the web it had just spun.

Suddenly Savary leaped down from the machine and his hand touched a lever set at its base. From the heart of the great mirror a new light flashed—a light that had never glowed for human eyes before. From the junction of the manifold cylinders—whose use had puzzled Nadja—at the mirror's very center a pale gleam of ethereal blue shot forward and out into space.

No more than a pencil's width, it rose and reached out and out, an unreal line of barely perceptible light speeding toward the sun. Suddenly it seemed to vanish into the remoter night. Nadja heard a shout of triumph beat against the receiver of her radio set. Knute Savary swung on her.

"I was right! There is still air on Speira!" he exclaimed. "Air too diluted for our instruments to record but the proof I needed that there is no leakage, only a dilation of the atmosphere, in the death of worlds. If there had been no trace of air here, the neutron-beam would have been invisible."

Nadja Manners caught her breath. "A neutron-stream! To tap the reservoirs of the sun itself?"

"I have already tapped them," Savary returned drily. "When I gave solar energy to the world fifteen years ago I harnessed the sun to the service of the world, but all that we could obtain was an unselective force—three-quarters of its potentialities were lost or squandered. Much of it could not penetrate our layers of air.

"Now, however, this neutron-beam should tap the greatest source of energy within our system as directly as a wire taps the juice of an electric plant. The narrowness of the beam will prevent an overpowering charge from disrupting the planetoid itself. But now I will switch it off. Before it can be really used, we must construct three others like it in a belt around Speira, so that as the asteroid rotates on its axis it will be continually charging itself from the reservoirs of the sun."

"Are the mirrors themselves part of the neutron-stream creator?" the girl asked.

"No. They are receptacles for solar energy in a less selective form with which I hope to regulate the terrific power that is going to be hurled across that slender beam. The smaller, upper mirrors are simply switches which turn off the neutron-beam by light pressure or vibrations when the charge coming across becomes too heavy. But—"

He broke off sharply. Against her head, Naja felt a touch of intense ultra-cosmic cold. The sun-filled blackness seemed suddenly to be swirling before her eyes. Savary's heat-gun crackled sharply across the dark. With fumbling fingers Nadja slipped the spectacles Savary had made over her eyes. Then she screamed.

The sky above them was full of strange and ghastly floating shapes. It was—her reeling mind registered—like looking into some unknown and nauseous dimension. As Savary had foretold, only the immediate nuclei of the airless beings were visible, the outer edges escaping completely the range of the strange, prismatic crystal.

Formless livid *things*, they pulsed with a light that had no counterpart on Earth—a vivid light, filled with colors that the human mind had no knowledge of. Like giant jellyfish too numerous to count.

EVIDENTLY something told them that Savary was the more dangerous foe. While she herself was left free for a moment from attack Nadja beheld innumerable folds—whether of one or many it was impossible to know—settle down around him as though by concerted plan.

The heat-gun flamed out, dissolving the vague ripples at his feet but the girl realized that they had managed to imprison his arms beneath their icy impalpable touch. The heat-gun spat once more, but only to scar the ground at his feet.

With a choked exclamation she hurled herself forward, feeling at the same

time a frozen touch seep through the space-suit's thickness at the back of her neck. Indifferently, she let it slip down her back in numbing waves while her heat-gun flamed in great arcs that swept over the things that swathed themselves shimmeringly around Savary. Like dissolving vapor, they melted and were gone.

The man swung towards her with a numbed slowness. She sank to her knees. Already the icy cold was mounting to her brain, for no human circulatory system could endure for long that unearthly touch. Suddenly, warmth flowed back into her veins!

Knute Savary stood over her, sweeping the oddly shimmering waves of the loathsome foe with both his guns.

His voice beat in on her imperiously, urgently. "Quick! Get a vita tablet into your mouth somehow! I can hold them off for a second but you must guard my back while we retreat to the ship."

Slipping an arm out of the inner folds of her space-suit, she managed to get one of the small, almost magic-restorative tablets into her mouth. Its effects were instantaneous—and stimulated her only just in time. Above her, a great translucent shape was pulsing down toward Savary's unprotected back.

Her ray caught it as it swooped.

Then, for uncountable minutes, there was nothing but this strange, nightmarish struggle against these unimaginable foes. Back-to-back, they slowly retreated toward the *Victory* while about them indescribable eddies and tides of spectral lights shimmered in horrible waves.

Like two people struggling within the bonds of some awful dream they lost all consciousness of time. Suddenly they found themselves stumbling backward against something hard and smooth—the stelumin side of the *Victory*. As though they sensed that their prey was escaping them, the fluctuating fluorescent *things* pulsed down in a grimmer attack.

Reeling, Nadja Manners felt that the whole world had changed to one swirling eddy of pulsating horror. Even under the lash of her will, her fingers were faltering, fumbling on the trigger. Icy tentacles fastened once more on the back of her neck.

Then the icy touch melted away as so many others of them had done. Savary's ray hissed past her head. The door of the space-ship was behind her and a strong arm lifted her and flung her bodily into the blessed darkness within.

Nadja stumbled to her feet and he barked in an unrecognizable, gasping voice, "Quick! Turn the ship's rays on them!"

With a last spurt of energy Nadja dragged herself to the nearest control-panel and jerked the main lever down. Instantly, the whole vessel flamed with a spitting green-hued wave of death. Behind her she heard the small door clanging shut. In her last moment of consciousness she saw Savary take a few stumbling steps toward her and collapse at her side.

THE distant sun had slipped below the jagged horizon of their planetoid world. In the warmly lighted central room of the space-ship, Nadja and Savary lay at ease on the cushioned seats.

The vision-plate in the center of the control board showed a starlit vault of sky, and brooding rocky peaks unsullied by any shadowy horrors. Either they had all returned to their primitive vapor under the terrible bombardment of flame hurled at them or the survivors had fled.

Now, after warm baths and a good meal, the two Terrestrials felt their physical vitality somewhat restored. The languid serenity that comes after combat hovered over them. Savary smoked lazily and Nadja lay outstretched against the cushions, watching the virile power of her companion's face between half-closed languid lids.

After awhile Nadja stirred from her contemplation and said absently, "I suppose the light they shed is below or above the waves visible to the human eye?"

Savary nodded. "Below, I think. The colors with which they pulsated are lo-

cated far below the infra-red. Their molecular vibrations are unlike ours, too. They are, I believe, as nearly beings of another dimension as it may be possible for us to perceive.

"That cold they generate is beyond all conceptions we have of the ultimate zero. I am pretty sure they have no existence for any of our sensatory nerves. It is only through our psychic senses that we realize them. They are on a dimensional borderline we have never as yet visioned."

Nadja shivered, "If they were wholly of another dimension they could undoubtedly leak through the walls of the *Victory* if they chose."

"Probably. But if our conception of matter did not exist for them they would have no power to harm us either. It is their borderline state that makes them deadly—too deadly to be allowed to survive," he added slowly.

"What can we do against them?"

"If that ancient manuscript is right they are a product of Sakka. I hardly see how we are going to continue our work here with the menace of these *things* hanging continually over us. It was only by a hair-breath that we survived today. If we are to continue our existence here, we had better declare war ourselves. Follow them to their planetoid and exterminate them if it be possible."

He looked across at the woman opposite him. She turned pale and shuddered, but her voice remained steady. "Why not?" she said.

Savary's eyes kindled. Leaning forward, he said, "I take back my indictment of your sex, Nadja Manners. Some women are the equals of men."

A slight flush mantled the girl's brow. Without answering she drew one of the stellar charts she had completed toward her. With one finger she measured the distance between Speira and Sakka.

"A few hours' flight," she said. "Less, if we did not have to start decelerating almost as soon as we leave."

"We can rest for a couple of days and then start. Within the *Victory* we shall have no dangers to encounter, I think."

Nadja rose, yawning. For a minute

[*Turn page*]

WHO ELSE WANTS
Better Shaves at Less Cost?

NOW! this Top Quality FULL-WEIGHT Blade in Handy DISPENSER

10 for 25¢

REGULAR PACK 3 for 10¢

• Try this rugged Blue Star on hard-to-shave spots. If any other blade, at *any* price, gives you finer shaves than Blue Star, we'll give you double your money back.

Blue STAR

SINGLE EDGE DOUBLE EDGE

PRECISION A·S·R PRODUCTS AMERICAN SAFETY RAZOR CORP. • BROOKLYN 1, N. Y.

she stood beside him looking down at the distant point of light that was Earth, swinging up from the horizon of the vision-plate. That trembling spear of light was—beyond all hazards of the present and the future—their ultimate goal, its salvation something which they must yet achieve.

She looked again at Knute Savary. He was standing over the stellar chart, one finger marking the small dot she had drawn on its surface for Sakka. There was a steel-like flash in the depths of his eyes. "In three days," he said, "we shall leave for Sakka."

CHAPTER VI

The End of the "Things"

ONCE more Savary consulted his charts, then swung down a lever. The braking rockets flung their silent flame across the void. Slowly, like a glowing yellow moon, Sakka rose into the frame of the vision-plate.

Everything was in readiness. In their cradles the rocket-boats lay ready for an emergency launching. The smooth walls of stelumin of the inner decks had all outlets closed against the possible rupture of one or another of the outer shells that ran in three layers around the core of the ship.

The great heat-ray guns waited. Above them, the smaller but deadlier disintegrators just ridged the faceted walls of the gleaming hull, while within the bow cabin of the spaceship small dull oblongs of metal lay ready to launch, bombs filled with radiumin liquid, a discovery which Knute Savary had withheld from the world because of its deadliness.

As he paused in the observatory and turned the telescope toward the growing disc of Sakka, the luminous edge of its sister planetoid, Lydda, swam into view. Neither asteroid was as large as Speira and as they sped through space in the asteroid orbit they seemed to revolve about each other as though they were the two spherical extremities of a whirling dumbbell.

Beneath them a strange liquefied surface glowed with a pale, livid yellow light and seemed to shift and quiver like agitated oil. As they sank closer, Nadja noticed that here and there in the cast surface of semi-fluid matter, a blunt white pinnacle seemed to obtrude.

This tiny world was not, like Speira, wholly stripped of perceptible atmosphere. The gases indicated were, however, unfamiliar to both of them. Only one, nitrogen, was known upon Earth. Savary lifted his eyebrows at the reading and abandoned the control-board once more to Nadja.

Removing one of the test-tubes from the atmospheric reader, he brought it into his laboratory and made a few rapid tests. When he returned Nadja was skimming low over the surface of the strange world. Savary spoke.

"Pretty place, isn't it? The atmosphere is radioactive, with a slight density and a near-zero temperature. I have always wondered whether radioactivity might not be a gateway or one of the gateways to another dimension. In any case, it is probably the mainstay of these creatures' existence."

As he spoke he drew out his rose-crystal spectacles and slipped them on. Nadja followed his example, and as they bent once more over the vision-plate, an exclamation rose to their lips.

Beneath them what had been no more than a sea of viscous fluid, suddenly transformed itself into a nightmare vision of pulsing league-deep layers of semi-transparent *things*. The whole planetoid was wrapped around in the obscene embrace of these formless horrors of the void.

Now and again one rose, pulsed upward with a play of impossible colors, and floated against the bonelike rock formations that sheered through his kindred's gelatinous mass. Nadja received the impression that they fed as they clung.

For a long time, she and Savary gazed speechless at this unbelievable sight.

Suddenly it changed. As though becoming aware of an alien presence for the first time, the whole sea of loathsome forms swirled and boiled over. Over and upward!

With no perceptible sense of individual action, the very surface of the viscous sea below seemed to curve hungrily upward in a mounting vortex of vibrating lights and angry colors. Even through the immense thickness of the space-ship, the deathlike cold of the nameless *things* struck with icy fangs.

Nadja switched on the great heat-distributors of the vessel to their fullest power. Savary waited till the vision-plate was obscured by the viscous clinging masses, then his hands leaped for the levers before him.

Instantly, destruction hurled itself in an all-enveloping swath from every pore of the space-vessel. An aura of crackling flame swept in great blinding whorls for a thousand feet in every direction!

BEFORE this outpouring of flame the *things* melted in great swaths of utter annihilation. But from the fathomless depths of their translucent layers ever-broadening whorls of their impalpable horror poured up in a vast circling funnel that had the space-ship at its core.

After awhile out of curiosity—for the crackling heat-rays were working a vast enough dissolution on the ever-mounting but outmaneuvered foe—Savary released one of the disintegrator rays and turned it on one of the oncoming waves of shimmering viscosity.

The result was unexpected. There was first the impression of a more than seismic shock. The beam spread, became a spray of struggling force, fell back upon itself in a shower of terrible sparks. Here and there, however, it seemed to penetrate and sink down within the pulsing beings in long disrupting spears.

"Something weirdly unreal is happening out there!" Nadja cried. "What is it?"

Savary, eyes glued to the vision-plate, said slowly, "I think that we are seeing a combat such as never has been on our dimensional plane before. These strange beings are vulnerable only where their material substance is of our world. Beyond the wall that separates our dimensions the disintegrator-ray cannot function."

Nadja said curiously, "But why does the heat-ray reach them?"

"Perhaps because heat and cold—even though as varying in degrees as the intense cold of these beings shows—may be one of the things we share with them. Radioactivity evidently is another. Cold may be their medium since heat is evidently the antithesis of their lives.

"We may have days of this ahead of us. Thank Heaven, the heat-rays are self-recharging. We cannot afford to stop until we have rayed every one of these beings out of existence."

The girl laughed shakily. "They give me the most unreal sensation."

Savary frowned and considered her. Her beauty suddenly struck him but he put the unwonted thought aside.

"Woman's receptivity is held by some psychologists to be more delicately adjusted than men's. Perhaps these things possess some purely pychic power, within their own spheres which they are trying to hurl at us. Is the impression very strong?"

"I can control it. Those bombs out in front—are you going to use them?"

"They may not act in the elements of this atmosphere—but I think they will. If they do it is these creatures' finish. Radiumin is the death of matter and that planetoid of theirs is matter, whatever they themselves may be. Release some of them, Nadja."

The swirling vortex of the things had never ceased but the space-ship sailed within a veritable cocoon of flame through which none of them could subsist for more than a few moments. Settling down to a protracted vigil Savary swallowed a stimulant and relaxed in his seat. There was little to do save steer the ship in its level circling of the tiny world. Nadja had gone forward to release the bombs.

As Savary leaned forward over the vision-plate, he saw one of them float

out and downward like a steel-colored shadow. Curiously, he watched its progress—down, down into depths that every rising wave of transparent beings showed more and more profound—till it was lost from view.

Another followed, then another. They vanished—mere harmless looking dots—in the unsoundable depths below.

Still the things swept up in boiling vortexes! Still they were met by the space-vessel's impregnable belt of flame. Then their ranks seemed thinner. They hovered in seemingly impenetrable hordes but at a distance.

Through the thinning eddies Savary glimpsed the distant disc of Lydda, disappearing behind the billowing horizon of Sakka. When it rose once more—a thin silver dot against the half-glimpsed peace of the remote night—Nadja came flying back from the bow-room and cried, "Look!"

FAR, far below, a mere speck against the swimming eddies of viscous-looking horrors, a crawling worm of unearthly blue writhed beneath the living seas of Sakka. Another circuit of the asteroid and they noticed a dozen twisting snakes of fire, crawling like living things beneath the other-dimensional glow. Savary drew in a sharp breath.

"It works," he said. "Nadja, you are seeing the beginnings of a leprous world, a world condemned, which nothing now can save. Let the things that possess it find another home in space if they can. Their planet is dead. That is what radiumin is—leprosy of matter. The only thing that will stop its march now is iron.

"Sakka is doomed—though her doom may take a year, two years perhaps to achieve itself. And the things on her are doomed too if they possess one grain of organic matter in their beings! You had better sleep now while I watch. Later you can take my place."

They divided the strain and tension of the succeeding days into four hour watches. Ceaselessly circling the asteroid, the *Victory* flamed with its endless message of death but the creatures of Sakka had the blind pugnacity of the bulldog. They swarmed in continuous malign attack around the destroying aura of their foe—swarmed and perished.

On the third day, it was possible to notice a change in the attacks of the shimmering translucent tides. The hordes rising against them were mere eddies now. On the crawling surface of the planetoid long snakes of blue devouring canker seemed to hiss and writhe. Above their heads, however, the throbbing light of the *things* appeared to mass in ever-denser reaches.

Nadja, returning from the observatory room, remarked with a wan, worn smile. "They are leaving their planet."

Savary lifted bloodshot eyes from the vision-plate. "We must rise above them then and finish our work. Hold steady for acceleration. I am going to turn on the rear rockets."

As they flashed upward, shearing a fiery path through the hovering masses, the beings gleamed with sullen colors and retreated. When at last they had won to clear skies Savary halted the spaceship, or rather braked its speed to a comparative hovering.

Reaching out toward Lydda an immense whorl of fluorescent motion was flinging an incredible bridge across space. The *Victory* hurled itself at them like a hound at its prey. Once more the cosmic battle locked foes of two widely sundered worlds in a close embrace.

Hurtling through space at a speed slightly beyond the maximum of the other-plane creatures' power of velocity, they swept the routed foe with the blazing death of their rays. Then reducing speed to that of the great streamer of fluctuating semi-matter, they sped along with it like a visible fiery doom.

SLOWLY, the heart of the great whirling spiral began to thin and grow ragged. Out toward the edges the formless things were fringing out into the void, away from the death that was returning them to their original vapor.

Nadja crouched over the controlboard with Savary as the hours sped

on. Suddenly, she laid her hand on his arm and pointed.

"Look! Isn't this new wave we are overhauling brighter and denser-looking than any we have yet seen? These are visible even without our glasses."

Around them a strange nucleus of brilliancy, livid and loathsome but oddly powerful and ominous, had gathered and thickened. Removing his crystal spectacles, Savary saw that this clot of things was effectively visible to the unaided human eye.

The girl, whose shaken mind seemed to receive the psychic messages of the outer *things*, cried out, "Somewhere at the heart of this brighter swarm is something vital to them—their king or brood queen or something. These are nearer to our world than the others. They are more advanced on their evolutionary path! Savary! Isn't it getting colder?"

"Yes," the man answered briefly. "The heat rays aren't working!"

The cocoon of flame in which they had moved for so many days, safe and invulnerable, had suddenly ceased to be. The great whorl of fluorescent foe was massing around them, pressing in against the outer end of the vision-plate, clinging in fathom-thick layers against the *Victory's* defenceless outer shell. Within the ship the cold struck with deepening bite!

Savary had flung back the panels of the control-board and was searching desperately for a clue to the failure of the heat-ray guns. Leaning over him Nadja switched on the disintegrator-beams. Their fangs leaped out at the blanketing tides clinging around the ship.

"It may hold them off a little," she said. "They are nearer to us than the rest!" Her breath hung whitely in the icy room.

"The combustion switch is burned through!" Savary gasped. "They are getting no more fuel! It will take half an hour to mend it!"

Nadja said quickly, "The rockets!"

Savary nodded. "It may kill us but it is our only chance!"

He swung on full acceleration. In one terrible burst of rocket-flame the space-ship hurled itself out of the gleaming things' embrace and away from their path at a speed they could not equal.

Holding the tearing agony of nearing bodily disruption at bay for one endless minute by sheer force of will, Savary kept his tortured body from falling for just long enough to give the *Victory* a clear impetus toward the free skies.

Savary returned to consciousness first. Crawling painfully toward the drawer where the stimulant-tablets were kept, he swallowed a couple and forced two more down Nadja's contracted throat. There was blood in his throat; blood oozing still from his nostrils. But he was alive and the limp form of the earth-girl beside him stirred.

Drawing himself painfully to his knees, he turned on the braking rockets and tried to form an idea as to their position in space. He had been unconscious a full hour. Where had the blindly hurtling vessel brought them in that space of time? Speira lay in the *Victory's* wake and uncharted asteroidal orbits lay ahead. He set the space-ship's helm to swing in a slow curve back along the path it had come, then turned to Nadja.

Bruised and wracked though he felt, his magnificent strength was returning to his mighty frame. Stooping, he lifted the half-conscious girl to a couch and rubbed her temples with a tonic-oil. Soon she was sitting up and looking around and Savary began gathering instruments from within his laboratory with a purposeful air.

He spoke briefly. "I must repair the heat-rays and then we must return and finish the Sakka things—follow them to Lydda, if necessary. They evidently intend taking refuge there."

The girl dragged herself to her feet. "I will prepare some food."

An hour later, the break in the heat-ray fuel-line mended, they saw Sakka's pale disc lift into the vision-plate. When they slipped on their crystal spectacles they saw the exodus of its beings had not yet ceased. The vast, undulating streamer of fluctuating light stretched now almost to distant Lydda.

"They are slow travelers," Savary barked sharply. "We'll overhaul them before they touch the other planetoid."

As they passed over Sakka he muttered a shout of triumph. Nadja's exclamation was one of horror. The small world was a writhing mass of bluish burrowing light. Those millions of the things that still remained clinging to the soil of their planetary home were dissolving before their very eyes.

Savary said, "If the planet has an iron core it will stop when it reaches that far. If not it will gnaw away till nothing is left and die of lack of matter to devour. Do you wonder why I refused to give to the Earth such an invention?"

"It's horrible!" Nadja cried. "Look! We are in the rear-guard of the things."

Savary touched a lever and the space-ship flamed once more with its aureole of fire. As though in panic, the things spread out and and strove to flee. Plowing through them the *Victory* cut a vast swath that disrupted the thin and stricken remnants of their emigrating tides.

They had no fight left. Like mists they melted before the blasts and the sense of their dying beat like some hideous dirge against the worn minds of the two within the space-ship.

At last Savary spoke hoarsely. "It is nearly ended. Hold on now. I am going to give her all the acceleration we can stand. Those things must be destroyed to the last one."

THE last day was a nightmare in which the inhumanly driven Terrestrials moved with leaden limbs and numbed minds. When at last the shattered peace of space held no more of the things, Sakka lay far in the rear and Lydda lifted like a moon athwart their bow.

Nadja was reeling as she walked and her eyes were dark holes in the ghastly pallor of her face. Knute Savary's eyes softened as they looked at her. He wondered how so frail a thing could have proven in the testing as resistant as the strongest man. He spoke sincerely.

"There is no man on Earth who could have proven himself a better companion in such an ordeal than you, Nadja. I am beginning to think I owe you thanks for your betrayal of me on Earth. I see now that the justifications I gave myself for my desire to be ruler of the Earth were false. My exile was merited."

The girl said quietly, "Not such an exile. Do you think that every minute I am not realizing what I sent you to—and that the Earth may die because I did it?"

Savary stood up and stretched. "In an hour we shall be hovering over Lydda. We can land there and rest, if it be an auspicious planet. We'll need two or three days of complete inaction before either of us will be fit for anything. I am telling you that you were right, Nadja. We need never talk of this any more."

CHAPTER VII

The Bird-men of Lydda

LYDDA gleamed—a clear red disc—across two-thirds of the vision-plate when Savary woke Nadja. An hour later they floated above barren outlines of jagged peaks and deep fissures a hundred times more fantastic than those of Speira. Slowly the *Victory* sank downwards toward this bleak scenery, coming to rest finally in what looked like the center of a one-time volcanic crater, as wide as a small sea.

They had landed deep in a red powder of desiccated matter. Around them sharp black alps stabbed the starry skies and cast inky shadows. An age-old death lay over this airless world.

Savary spoke. "I think that we can safely sleep here. This almost makes one homesick for the mineral lands of the moon."

For two days, the space-ship lay undisturbed in the silence of the dead planetoid. Its crew slept and woke to briefly eat and sleep again. On the third day Nadja woke to a renewed glow of vitality. Taking a cold shower and

dressing quickly she found that Savary had flushed the air of the space-ship with bracing extra oxygen and was doing setting-up exercises in the small gymnasium.

After breakfast they flung back the shutters of the observatory and looked out. A rising sun was beating like a molten hammer against the ruddy rocks of Lydda. It was a small world but its revolutions were so slow compared to those of Speira that the days were only two hours shorter than those of Earth. Suddenly a tremor shook the mighty hull around them. Slowly—as things move in a dream—the nearer black peaks began to move, to glide past them! "The ship is moving!" Nadja cried.

Dashing into the control-room, Savary flung on the braking rockets but flame hissed out into the silent world in vain. Lightly as a feather the *Victory* passed over the powdery soil with a quicker and quicker glide. Tense-lipped, the man within turned on rocket after rocket with no perceptible result. The space-ship was slipping—propelled by what strange agency neither knew—toward the bowl-like vent at the crater's heart.

Suddenly they were looking into the black depths of a cavernlike fissure, immense and impenetrable. Savary was flinging on the last of the braking rockets when Nadja laid a hand on his arm.

"Perhaps I am mad," she said. "But something within me is saying and repeating that the power that is holding us is friendly, that we must not fight it."

Savary frowned and stood still in deep thought. As though some message had reached his inner self also he walked across to the radio-receiving set and switched it on. A low hum purred across the room. Then—words! Unintelligible words, but distinct syllables that droned and paused. Nadja flew to the radio-transmitter, spoke into the microphone.

"Who are you? We do not understand your language."

The voice paused a minute, then in slow halting English, it said, "We are not enemies. Our beam of force is drawing you toward the entrance of our world. If you want to fight it turn on your rear rockets and outstrip it. It is strong but very slow. This is proof that we do not wish to hold you unwillingly. Our world is at the heart of this planet.

"If you wish to come here and exchange your wisdom for ours, allow the beam to pull your ship through the crater opening ahead of you. In two hours you will be in an atmosphere composed of—say the names of your atmospheric gases, please, through the speaker you possess. Ah! Thank you. Here is the composition of ours."

A brief atmospheric formula was given and the voice ceased. Savary walked to the transmitter and answered. "We would be pleased to visit any friendly people whose minds are so developed as to be able to seize on a new language and use it instantly."

Nadja flung herself on a couch and laughed. "There are more things in Heaven and Earth than are dreamed of on one planet," she misquoted. After the two days' rest her eyes glowed and her cheeks had recovered their color.

Savary stretched his superbly muscled form and felt the simple uncerebral pleasure of being alive and healthy. The slightly over-oxygenated air of the ship stimulated them to a leaping vitality. Other beings were alive in this desiccated world! Other minds were reaching out in friendliness toward theirs!

THEY were engulfed in total darkness. The ship lurched. Then they were plunging down some immense gap in the dead planetoid's crust.

They seemed to slip into a vast metal-lined tube where immense doorways folded back before them at their approach and swung to behind them. For an hour they slipped smoothly down and Nadja grew restless. The silence and the continuous hurtling through the Stygian night of a planet's heart quenched her gaiety if not her courage.

She looked at Savary, who sat with creased brows, immersed in a deep abstraction. Suddenly he smiled.

"We shall be there in a few minutes."

"How do you know?"

"I have just been told so in the same

way, only more clearly, that you were made to feel that these beings were friends. I have been letting my mind respond to theirs. I think you can probably do it too if you try."

As he spoke, the space-ship faltered and came to a standstill. Eagerly they bent over the vision-plate. They were in a vast amphitheater of smooth black rock, whose walls reflected the light which poured upon them for some unseen source high above their heads. It was as light as day.

Through the radio the voice said distinctly, "There is atmosphere around you. Perhaps you had better see if it is suitable."

Nadja walked over to the atmospheric reader and said after a few minutes, "The atmospheric pressure is slightly higher than ours—about that of our higher summits—but the composition is nearly that of the Earth."

As Savary bent over the test-tube she looked into the vision-plate. The ship had come to rest in a huge cradle of black metal and on a narrow platform beside it a strange shrunken semi-human form stood peering at it.

Savary spoke. "I think we can risk going out without our space-suits."

Strapping disintegrators to their sides and filling the airlocks from the reservoirs of the ship they stepped out into this new world. The air which they drew into their lungs was strangely pungent but apparently harmless. Above them, the vault of the cavern lifted till it almost lost itself in the upper distances. From a whirling incandescent globe—a ball of sunlike brilliancy a hundred feet or so in diameter—a warm and dazzling light poured down upon the space-ship. Narrow runways bisected the entire floor of the cavern, whose whole appearance was that of a very modernistic airway station.

The dried-up being Nadja had seen through the vision-plate walked up to them and saluted gravely once more. He was, they saw, a bleached and dwarfed old man with arms that looked as though they had evolved from wings and ending in many-fingered clawlike hands. Feathers grew in a close gray cap over his bony skull and his eyes were enormous in a wizened puny face. He wore one draped garment of some metallic tissue, and his feet faltered as he walked as though he was not used to demanding much of them. His voice was sonorous and pleasant, however, as he greeted them in English.

"Your language is an easy one to absorb and resolve. We saw your space-vessel resting on the edge of the crater that is one of the gates to our inner world and we were curious to learn who you are. In the half-million years that Lydda—the name you give to our planet—has lain barren and stripped of air none have come here nor have we seen other signs to indicate that space-travel had become feasible. You may accompany me without fear. Knowledge is all we ask of you and we will give you ours in return. Follow me—if it be your will."

Savary spoke slowly. "We are people of a distant planet called Earth. It is the third from the sun. You, I suppose, are the original inhabitants of this planetoid, who have fled from the airlessness without?"

"Even so. Will you step into this conveyance—thus? In a few minutes we will be where the Older Ones—the rulers of our world—await your coming."

The small metal shell into which they had stepped slipped—moved like the space-ship by some invisible force—through a succession of low passageways hewn out of the black basaltic rock. It came out into an indescribably vast cavern—a veritable inner world—where it rested on the edge of the terrace of a great building.

The air radiated with a warm energy that came from the almost invisible source of light. No vegetation existed within sight and the buildings seemed made of some dark metal that would have been depressing without the diffused radiance from the heights.

Their guide led them through a doorway into a lofty hall, plated in a bluish metal of many delicate reflections—where a group of tiny feathered men sat

behind a white table of some quartz-like stone that ran half-way across a raised dais. One rose and came forward with fumbling steps.

"You are of the higher mind," he said in groping English. "We can then dispense with the talk of the tongue that our people have abandoned long ago."

SAVARY bowed. He looked steadily at the little man and suddenly Nadja began to sense an interchange of thoughts between the two that grew clearer as she set her own mind to follow it. The leader who had welcomed them waved them to a seat with one feathered arm. He then spoke—or rather thought.

"We have looked into your minds—with your consent, of course—and found that you come from the planet that is at the meridian of its life. We call it Tellus—you call it Earth. We have not looked on it with material eyes for nearly a quarter million years. In that time we have never gone to the surface of our globe but our inner vision has viewed it and all the others of the solar system.

"We are glad that its people are of so high an order of evolution—high enough to have conquered the barriers of space, which we considered insuperable. Will you tell us what brought you here?"

As he spoke, the Terrestrials felt the surge of thoughts reaching out and questing into theirs. Savary's mind attuned itself almost immediately to the rhythm of thought-exchange and in brief succinct thought-phrases, he told of their coming to Speira, the onslaught of the things and the destruction of that planetoid and its shimmering hordes.

As though only a certain number of minds could follow a tale told by one, three or four of the Older Ones turned their thoughts to Nadja. Stumblingly at first but with growing firmness she took up a part of the burden of the tale. A great help to the two Terrestrials' first efforts was the extraordinary sense of peace that pervaded all relations with these people of inner Lydda.

It hardly needed the history the council leader, Glom, told them in answer to their many curious questions, to show them that they were in a world where the intellect alone was king—where age had turned all emotions into sifted ashes.

Glom told them that the people of Lydda had followed an evolutionary course not unlike that of humanity, with the difference that the higher gravity, allied to air almost as dense, had favored the evolution of the reptilian lizard and subsequent bird offshoot of the common life stalk. In the struggle of nature the prize of evolutionary adaptability had gone to the biped oviparian species, equipped in their primitive days with wings which had slowly atrophied as the race became more civilized and therefore more physically decadent.

They had reached sovereignty on their little world some two million years before—a particularly benign dominance with but few bloody pages to its record—till the same doom which overwhelmed Speira had come to them.

"When first we noticed the fatal leaking of our life-giving atmosphere into space," Glom said, "we were at what was probably the highest peak of our racial vitality. Therefore, after installing means for manufacturing all the necessities of life here and preparing ourselves for what our scientists foresaw as an eternal exile from the surface of our planet, we turned our back on our dying upper world and emigrated in our thousands to the caverns you see here.

"Since then, subsequent scientific inventions have made of this inner world a place devoid of any need of effort. Science serves our every need. Denied the stimulus of life on the more exposed surface, we have sunk into what is in some ways a rut of peace and purely mental research."

His thoughts ceased to use words at this point and lapsed into swift mind-pictures of the Inner World of Lydda. There were luxuries here undreamt of on Earth. But everything was static, unmoved by the fluctuating tides of change. The whole planetoid seemed to exist in a sort of Nirvana of the senses, a dreamy

achievement of all things mental, with a consequent indifference to purely physical or emotional ambitions.

One of the Older Ones reiterated what had been said to them over the radio.

"We wish to exchange knowledge with you both. Are there things about the cosmos you would like to know? Maybe we can tell you some of them in exchange for what we now lack . . . the wisdom that comes of actual physical contact with facts. We have already learned much from you.

"We have known for long of the existence of the Neara of Sakka—for that is the name we give them—but of their actual potentialities and origin we were ignorant. Your belief that they are advanced forms of life in another dimension that have slipped over the invisible borderline into ours interests us.

"This strengthens the belief held by our most advanced scientists that both dimensions are part of the cosmic plan. Some day the converging paths they are taking may merge and create an immense struggle in which coexistent worlds, as well as coexistent life, will meet in an epic battle for existence in one single dimension—or rather a welding of both dimensions into one single plane that will form the nucleus of a new system."

CHAPTER VIII

Telzon of the Older Ones

WHEN he had finished they left the council chamber for a short tour of the Inner World of Lydda. Nadja and Savary were furnished with two belts equipped with small inner-power generators—boxes no bigger than matchholders ranged on the inside of each belt—and instructed in the use of them.

A series of small buttons on the outer side of the belt released the amount and kind of power required in the form of beams that propelled them where they wished. The effect was remarkably like flying but wholly effortless.

Mechanically speaking the Inner People had stopped their development at a point where their comforts were satisfied. They had light and heat, atmosphere and power—synthetic foods that the Terrestrials found to be palatable though monotonous and other things similar to what Glom had showed them on the second day of their stay there.

Bringing them to a great side-cavern reached by one of the smooth metal-lined tunnels that formed the usual system of communication between the more distant points of their subterranean world he showed Nadja and Savary row upon row of strange metallic forms—robots activated by a special magnetic beam to enable them to do all that living entities could achieve save feel and think.

"Two thousand years ago all work was done here by means of these robots," he said. "It was in that time that we discovered that our race was losing all of its physical vigor.

"Since then we have reimposed upon ourselves the physical burdens we had sloughed off as handicaps to our mental development. Although it will take another five hundred years perhaps for us to achieve any definite progress in that direction, we are once more aiming at that perfect balance of body and mind which we now know can alone produce the most.

"We still use our machines to free us of common drudgery—but the mechanical servants have ceased to form a part of our lives. None may use them—though if greater danger threatened they could be put into commission once more."

Another Older One walking, or rather gliding, beside Nadja added, "You yourself serve as proof of the truth of this theory which we so long disregarded. The physical development of your friend is extraordinary to us who have let our muscles waste away for so long, yet we find his mind the equal of that of the best of us here."

Nadja glanced at Savary—at the vigorous symmetry of his lofty figure and the Olympian modelling of his head. Standing in the vast cavernous reaches of the resting place of the robots, he looked like a Titan among the wizened sages of Lydda.

The birdmen treated them with grave and dignified hospitality. At the end of their day they were given adjoining rooms of great airiness and height, roofed with a transparent glasslike substance that allowed the beams of the outer light to penetrate easily but which it was possible to darken through some agency that clouded the crystalline roof with a suffused and restful green.

The rooms were bare of any furniture whatsoever. Each article was summoned as needed from recesses in the walls. Nadja's first experiment with the imposing array of push-buttons in the walls set a panel revolving, on which a low lounge appeared with two broad chairs and a small table between them. Another produced a mirrored recess flanked with cupboards for clothes. A third finally revealed a bed—a high nestlike arrangement to which they had to waft themselves by means of their power-belts.

ON the second day, a banquet was given in the great council hall. Savary, anxious to get back to Speira and the vast undertaking left in abeyance there, had announced their departure on the morrow. A hundred or more of the Lyddan leaders assembled, not to eat—eating was done privately and briefly without any symptoms of enjoyment—but to drink of a crystal-clear liquid, aromatic and strangely luminous, which possessed an extraordinary power of stimulation over the mind and psychic powers. Glom warned them to use it sparingly.

"Enough of it will render almost transparent the intangible wall that divides us from other planes," he said. "It would probably take much less of it to bring you to such a stage than is now necessary for us."

As they half lay, half sat in crescent-shaped chairs, the cross currents of thought-talk seemed to flow like some invisible ichor through the vibrating air. Wizened though the little bird-men were in physical appearance, their minds were those of demigods.

Science as yet undreamt of by man unfolded in that strange interchange of thoughts. Nadja saw that mankind was—despite its vast strides forward of the last few centuries—merely stepping across the threshold of thought and knowledge. And then she remembered that this threshold might never be crossed. Doom was reaching out for the Earth.

As her mind shivered from the vast spectacle of cosmic waste she hardly noticed the frequent sips she was taking of the crystal liquor before her. It was only when the aged men near her began to take on indeterminate outlines, like fusing glass, that she realized too late how much of the potent liquor she had imbibed.

She felt as though her whole being was enduring a transmutation into some fluid state or existence against which she could neither fight nor object. It was like being immersed within a cloudy crystal sphere under the waters of an unbelievable sea where half-seen shapes sent the vibrations of their being through a medium that had no existence for them. As she floated in some dim world of dissolving fantasies poised above unattainable realms, planets that followed cosmic rules, yet possessed no imaginable cosmic shape or substance, reeled through skies of impossible light.

Then—slowly, laboriously—a pungent smell broke through the transparencies and bodiless existences around her. She came slowly back to a sane and concrete world. Savary was bending over her with a look of concern in his eyes, holding a flask of green liquid to her nostrils.

As she sat up, the Lyddan Older One beside him began to smile. "I told your friend that you would come back," he commented. "The barriers between are still impassable, though in a few more million years they will have grown very thin."

Savary straightened and spoke briefly. "I thought you were dead. I looked around at you suddenly and you had fallen into a sort of trance. Don't take any more of that liquor!"

Nadja shook herself and smiled. "I won't. But it was worth experiencing. I think I have looked into a world where Time is Matter and what we call Matter has no being. It was like looking through walls of one's own atomic structure at something co-existent with us, yet infinitely removed from our reach. What is there in that drink to make one see, even though dimly, through the wall between us?"

A very old and wrinkled bird-man answered, "We hardly know ourselves. The formula of Pulnore does not respond to analysis. Each component part of it has no potency without the others. However, the very existence of two worlds in an identical point in time would create some impinging vibrations —not material, but purely psychic. The effect you have just experienced is not unusual with us."

IT was late before the banquet adjourned but Nadja, feeling Savary's watchful eyes on her, left the sparkling Pulnore severely alone. Before they retired to their last sleep on Lydda, Glom spoke to them.

"We have decided to offer you a few of our mechanical men to help you in the gigantic task of reviving our sister planet, Speira. To you they will not be harmful. When you have finished with them you can either destroy them or store them somewhere for future eventualities. They will simplify your task greatly, as will also the power-beam which shall accompany them as our gift to the first ultra-planetary visitors of Lydda."

Savary expressed their appreciation and then the Lyddan continued, "We have been looking at Sakka. The iron core of the planet has been reached by your creeping destruction and it has stopped its work. In case there be any spores or germs of it remaining on its surface we are sending out, on a beam of force, a repellent of the same nature as yours, that will render its pitted and gnawed core of metal forever hostile to any form of mineral or organic matter."

On the morrow—after a brief lesson from the Older Ones in the use and management of the robots that had been loaded on their ship—the Terrestrials made ready for their departure. The whole council of the Older Ones accompanied them to the great landing cavern where the *Victory* waited.

They made a survey of the space-ship and commented favorably on the many inventions of Savary's genius with which it was equipped. Savary offered to bring them on a trip into space but Glom refused in the name of all.

"We represent age," he said, "and age has lost all taste for sensation or change. We are content to range with our minds. We hope that you will come back to us when your work on Speira is finished. In the meantime, go with our good wishes."

"If we are successful in returning air to Speira would you like us to do the same thing for Lydda?" asked Savary.

The Older One shook his head. "We presumed you would make us this offer. After reflection, the council has decided to refuse. We have peace and plenty and happiness here. Why seek change? If you would give us the formulae of your invention we might like to hold it against some future eventuality."

The engines of the *Victory* had been switched on and their almost imperceptible throbbings animated the cradled ship. The last Lyddan had descended from the space-ship and Glom waited only for the closing of the small side entrance to give the signal that would propel the vessel upward through the metal-lined tunnel to the surface.

Suddenly there was a slight commotion amongst the gathered Older Ones without. One of them was pushing his way on fumbling feet through their feathered ranks. The ancient bird-man swung himself up into the doorway, and she saw that he carried a heavy bundle in one hand. His thoughts hurriedly explained his presence.

"I have decided!" he cried mentally. "Take me with you to help in the revitalizing of our sister world! Our race has been inactive too long."

Emotion showed on the faces of all the gathered Older Ones. Glom turned his mind towards Savary.

"This Older One is one of our greatest chemists. He will be of great help to you should you find and try to reanimate the sleepers of Speira."

At a nod from Savary Nadja held out her hand to the daring sage and drew him within the space-ship. The feathers of his skinny arms were quivering with emotion. The door clanged shut behind them.

Nadja gave the old Lyddan, whose name was Telzon, a room in the forepart of the ship and saw to his comfort. He was still panting slightly, less, she thought, from the speed he had made to catch the *Victory*, than from the emotions incident on making his decision.

The red rocks of Lydda were glowing moltenly in the untempered sun when they emerged upon the surface. Telzon's eyes grew suffused with emotion as they rested on the desolate remains of the outer world that had bred his race.

Savary felt a pang as he read the old bird-man's expression. How long would it be before the lush and smiling Earth would be like this air-stripped and desiccated world? A fierce eagerness to be back on Speira welled up within him.

As the space-ship hurled itself into the now familiar void the bright arrow-tip of Earth launched its beam of light at them over the highest of the dead planetoid's peaks. The lunar world sank away beneath them and the bright flares of the distant stars burned coldly against the unrelieved night.

CHAPTER IX

Revolt of the Robots

THE brief span of one more airless day had drawn to an end. As the rayless sun dipped below the inky peaks of Speira, plunging the planetoid into its oppressive spatial night, Savary, standing with a Lyddan beam apparatus in his hand, directing the work of half a dozen Lyddan robots, looked up at the suddenly unrelieved darkness with satisfaction.

He was standing in a vast plain that was fringed in the far distance with a saw-toothed edge of jagged peaks—the location chosen for the last of the great machines that would bring air back to Speira. The footsteps of time had leveled everything here to a uniform smoothness. Only the practically completed web of the neutro-beam projector relieved the powdery flatness of its forgotten spread.

With the onslaught of darkness the robots became visible only through the gleam of their headlights as they welded the last stelumin beams into place. Across the distant hills an approaching rocket-boat caught a last gleam of sunlight as it rose to clear the peaks. It was Nadja bringing the last piece of metal needed to complete the mighty task they had undertaken.

The craft sank to earth. Telzon as well as the girl stepped from it. This was unusual, for the old bird-man rarely left the space-ship where his vast store of knowledge made him invaluable in the laboratory and released the Terrestrials for other work. Now, as he floated down on the propulsion of the controlling beam, Savary sensed that only some worry or anxiety had brought him out there. While Nadja towed the great piece of shining metal she had brought close to where the robots worked, he thought quickly to Savary.

"Tell me. Have you noticed anything strange in the conduct of the metal men lately?"

The Terrestrial answered in some surprise, "They have seemed oddly sluggish in their responses to the force-beam."

The Lyddan's voice was deeply troubled. "I have been noticing the same thing amongst those working around the space-ship; so much so that before coming here I thought it prudent to march them all into one of the deep pits left by

meteors near the emplacement of the *Victory* and leave them stored there."

Savary stared. "But my dear Telzon! What do you fear from them? They are nothing but metal."

Telzon shook a dubious head. "I feel that this is no longer wholly true. There have been waves of resistance from them for some time now. Today they seem to be more definite. I—"

He came to a sudden halt. A sharp scream had torn through the radio receivers of their helmets. A half-hundred yards away Nadja was struggling in the metal arms of a robot. A moment later, the other metal men had flung away their tools and were clustering around her.

Instinct overriding judgment for perhaps the first time in his life, Savary flung himself towards that frail and struggling form. Immediately two of the huge mechanisms flung themselves upon him and pinioned him under their enormous weight. His disintegrator spat vainly only to pour off the smooth metal of their bodies.

Dimly he saw a horrible vision of Nadja struggling hopelessly in enormous arms while the monster who held her seemed to shake with a brainless and loathsome mirth. The remaining metal monsters were moving in slow ungainly fashion towards Telzon, when the little Lyddan's thoughts shrilled into Savary's mind.

"Think them down! They cannot have very strong minds as yet! *Think yourself free!*"

IT was their only chance! Gathering all his strength, Savary hurled the full power of his mind against the brute —like a weapon, against the rudimentary budding brains of the robots. Under that bombardment of mental vibrations the nascent mentality of the metal things could not stand up.

Slowly the metallic arms loosened from around him. He willed them to rise, to lift their weight from his pinioned body. Suddenly he was free! Sullen but mastered, the robot giants around him had withdrawn. He stood up and turned towards the place where Nadja had been writhing only a minute before in the robot's arms.

She too was free. Telzon had hurled his own highly trained mind to the rescue. Like creatures dazed, helpless though still obscurely malevolent, the strangely animated mechanisms hovered at a distance striving feebly to war with the coercion that beat upon their rudimentary minds.

Savary grew conscious of the fact that they could not hold them there forever. Then an idea flashed across his brain. He flung it over to Telzon and to Nadja, whose groping thoughts were reviving. Uniting their minds in one common impulse of will they beat an order on the sullen robots that made them slowly turn away and move like creatures in a dream towards the neutron-beam generator nearby.

Grotesque shadows of the star-lit night, they scrambled over girder and beam and climbed heavily into the vast bowl-like mirror at the heart of the immense machine. Enough stored power remained in the reservoir of the solar-plant beneath the concave mirrors to allow the machinery to function. Savary flung his weight upon the lever actuating the neutron-stream.

For a bare fraction of a second a tangled black mass seemed to be hurtling through the starlit night. Then the neutronic stream faded as it passed beyond the frail air of Speira. Savary switched it off. There was nothing left in the vast mirror-like bowl.

"Where are they?" Nadja asked in a whisper.

"On their way to the sun," Savary said grimly. "Are you hurt, Nadja?"

"Bruised, that is all. Telzon saved me. They were going to dash me against the girders of the machine! But how did they come alive? Metal can't live!"

Telzon answered. "Under given circumstances, it might. We have evidently seen the given circumstances. After all, there is no proof that life is the result of only one form of chemical reaction. We have never known what is the factor that determined the first stir of life in

the protoplasms from which we sprung.

"Who knows that—with an efficient organism waiting and ready to take advantage of it—the same or a like factor may not have suddenly operated with the metal men? Who can say what that factor can be?"

"In any case, we owe you our lives, Telzon," Savary said gravely. "I wonder if exposure to the untempered force of the cosmic rays may not have stimulated the robots' metal cells to life?"

"Let us get back to the others!" Nadja cried worriedly. "What if they should escape and rebel too?"

They hurried to the ship's emplacement. As the rocket-boat skimmed over the edge of the plateau that had become the *Victory's* set landing place, Telzon was betrayed into a vocal shout of horror.

"The pit!" he cried. "It is empty! They have escaped!"

Almost in the same breath, Savary spoke in a still, terrible voice. "The ship! Nadja, the *Victory* has gone!"

They looked above their heads. Far up and quickly receding, a cylinder of metal flamed against the constellated skies.

It was Nadja this time who recovered first. She cried, "Telzon! Can our thoughts reach out that far?"

Savary came sharply to full awareness. "They must!" he snapped.

In a stillness that strained and beat out against the stellar wastes, the two humans and the bird-man fixed the vibrations of their wills on that distant gleaming fleck. They sat as though turned to stone. Suddenly Nadja spoke in a whisper.

"It is returning! That spot of light is a rocket flare."

The others did not move. Slowly the point of light that was the *Victory* broadened and grew. There was no mistaking it now. Within the minds of the three who were sending their wills out in compelling waves against the metal things, the feeling of dominance rose like a tide.

Nadja could dimly feel Telzon's trained and experienced mind reach out to will each move of whatever robots were controlling the space-ship's machinery lest they crash it upon landing. Closer and closer it came.

SLOWLY the ship hovered, settled, came to a perfect landing on the seamed terrain. After an interval one of the doors opened and the robots within filed out. Slowly they walked toward the base of the vast solar-machine which Nadja and Savary had first built. One by one, they hauled themselves up its girders and into the huge mirror-bowl.

Leaving Nadja and Telzon to hold them there, Savary flung himself forward and pressed the lever that set the neutron-stream free. Somewhere in the void above, the metal men so strangely sprung to life hurtled towards the unimaginable furnace of the sun.

They had done their part. The apparatus for revitalizing Speira was complete.

* * * * *

Once more night ruled on Speira as it had ruled for thousands of airless years. A duskless dawnless world, the planetoid rolled slowly on her axis as she had rolled for aeons—unexpectant, dead, frozen. Standing by the great solar-machine that was first to receive the ray of the awaited sun, Savary, Nadja and Telzon watched the jagged horizon.

One moment all was dark as only an airless world can be dark. Then a blinding glare leaped up between the saw-toothed peaks. Day swept out upon the turning world in a cruel burning panoply and Savary pressed the lever of the neutron-beam. Speira's most momentous dawn had come!

Like an arrow loosed into the heart of the sun the shimmering pencil of matter leaped out across space. Slowly the great mirror moved to follow the path of the mounting sun across the jet-black sky. The small mirrors above caught and held the burning power from afar like miniature stars.

Savary stood facing the mounting sun. In twenty minutes he would know if his calculations were right. If they proved

wrong—Speira itself might be consumed in the fierce magnetic current that would hurl itself across the strange thin bridge into its dormant core. Time passed slowly, then Savary turned abruptly around.

"We must release the other machines now," he said. "It will be dangerous to be here when the current comes across. When we come back we shall know!"

The sun was halfway down the black sky when they returned. Slanting across the dark plateau ahead a thin bar of brilliant flame seemed to be pouring itself into an incandescent pool of vibrating light. The rocket-boat suddenly began to rock and toss as though under the buffeting of enormous seas. Savary nosed it sharply to the ground.

"It works!" he cried. "But it is dangerous for us to be here. That beam of light is really an imprisoned magnetic field—a magnetic field infinitely compressed. I think that we had better leave the planetoid to its own devices for a while. Constant exposure to the effects of the charged beam may have results we may not be able to cope with."

Nadja nodded acquiescence. "Why not explore Marinoe and Reinos? What do you say, Telzon?"

"The last two of the sister planets? It would be a good way to occupy the interval that must elapse before we see if Savary's experiment is a success or not."

CHAPTER X

More Land for Marinoe

A YOUNGER planet than any of the others," Savary said on a note of interest as he bent over the vision plate. Beneath them floated a pleasant world of dancing waters. Nadja's eyes were sparkling as she turned from the atmosphere indicator.

"Air!" she cried. "Air, like Earth!"

They were sinking down between shredded banks of clouds that filtered the sunlight onto the tossing waves below. Flying close to the surface they searched for land but only narrow islets, mere reefs lifting above the surrounding waters, greeted their eyes.

Nadja spoke regretfully. "It is probably uninhabited."

Telzon thought a negative. "There are beings that can think here. I have been feeling the commotion of their thoughts since first we began flying over their sea. Look. There is an island big enough to hold the *Victory*. Let us descend there."

They sank downward. Blue waters, gay as those on Earth, danced under their gliding shadow. On the island towards which they aimed green rushes waved lightly in a half gale. They hastened out eagerly to taste of the fresh oxygenated air, moist with the spray of dancing water.

Nadja stooped and splashed her hands deep into the sparkling waves that dashed themselves against the shelving beach, while Telzor looked around him curiously. Stepping apart from the others, Savary let his glance wander over the world of sunlit water and cloud-dotted sky that surrounded them.

Once more the insoluble problem of the vast cosmos assailed his mind. How, he asked himself, did this young planet come to form part of the dead system that surrounded it? Here was a planetoid as young as Earth had been when she lay productive and pulsing with the fertility of a vast elemental laboratory in the arms of the first of all her seas.

Breathing deeply, he wondered what forms of budding existence, what forerunners of future living species, were even now following the infinitely slow and imperceptible paths of evolution beneath those laughing waves.

A call from Nadja drew his attention. She was standing on a rock, facing the shoreless sea, her face flushed with the caress of the breeze and her hair flying loose in warm bronze curls, looking for the moment like the young and glowing Russian girl he had first taken into his laboratories. Her hand was extended towards the sea and he followed it with his glance.

On the incoming billows, a strange apparition was moving towards them. When still some distance off, it halted, sending them some message neither Nadja nor Savary could understand. Telzon, however, with his mind trained in the immediate deciphering of the language of any thought, turned to his friends.

"He asks us if we are friendly to his people. I have assured him that we are. He wants to know what kind of beings we are."

As he spoke the being seemed to lose some of its fear. Walking, or rather waddling, on webbed and only partly bifurcated lower limbs, it emerged from the backwash of the waves and considered them.

Its body was covered with the close scales of a fish, though its face and arms possessed a sort of glistening skin like that of a dolphin or shark. Its face was round and gentle and reminded Nadja of that of a seal.

"Could I exchange thoughts with it?" Savary asked impatiently.

"No. His mind is incapable of adapting itself to pure thought transference and you are not old enough in the science to adapt your mental waves to an unknown tongue without previous study."

"What does it call itself?"

"A 'Finnuis,' he says. They are the ruling race on this asteroid, equipped evidently to live either under or above the water. He is calling others of his kind now. Millions of years ago his people dwelt on land and were happier than they are now. One day the land they lived on disappeared under the waves and they had to return to the amphibian habits their ancestors had possessed."

Nadja was highly interested. "Look!" she said, "He has gills on each side of his throat like a fish, as well as nostrils."

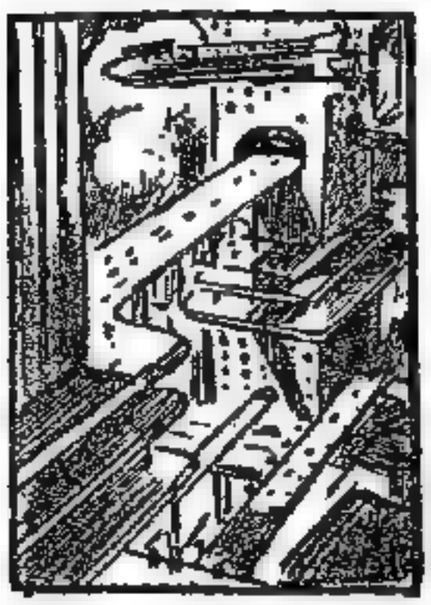
WHILE she spoke, a score or so of Finnuis or fish-men appeared on the farther billows and two of the more daring among them waddled out of the milky wash to join the first, casting frightened looks at the great space-ship as they did so. Telzon carried on an animated exchange of thoughts with them, translating the results.

"We have indeed come to a young world," he said. "This first Finnuis is a chief among his people. He tells me that the seas teem with thousands of forms of varied life but that his is the dominant one.

"They need help in the fight they are always waging against the ferocious denizens of their seas. They ask if we are powerful enough to bring back the land that the sea has swallowed, so that they may live once more away from their ocean enemies."

"Tell them that we are not gods," Savary said, "but that we wish to be friends, that we may even perhaps find some way of uncovering some of their submerged lands. Ask them what other forms of life are the next strongest here."

[*Turn page*]



THE PEN THAT WROTE BY ITSELF

—was more than a gadget, because with its help Rena Corson and George Brooks bridged the chasm of Eternity in

SUNDAY IS THREE THOUSAND MILES AWAY *by Raymond F. Jones*

featured Novelet in June—

THRILLING WONDER STORIES

NOW ON SALE—25c PER COPY AT ALL STANDS!

"Great shark-like creatures and gelatinous animals, seemingly of a low evolutionary order but almost impossible to kill, he says. Apparently, the whole sea swarms with life, pugnacious, voracious life, against which they must constantly struggle."

"Have they larger islands than this?" Savary asked.

Telzon questioned them and the Finnuis clearly indicated that they had. It was there, they explained, that their wisest men and leaders lived. Savary told Telzon to invite a few of them to enter the space-ship and show them where these islands were but when the old Lyddan interpreted the invitation, a rustle of terror ran through the assembled fishmen.

Half of them dived into the waves and disappeared, but their leader and seven or eight others stood firm. Nadja admired their valor as they clambered painfully into the *Victory*. They could hardly manage the steps and needed considerable assistance but their quivering courage held firm.

"They are valiant savages," Savary said, "something more than that. That chief of theirs is a brave fellow."

Nadja fastened the outer doors, then asked, "Do you think it would be possible to lower their sea level as they would like?"

"It should be no harder than some of the things we have already achieved. I must think it over. In any case this is an interesting little world—worth investigating."

As the space-vessel hurled itself upward the Finnuis flung themselves upon the floor of the control room in agonies of terror. After awhile, however, the leader recovered composure enough to creep to the vision-plate and give some fumbling directions as to the course the ship should take.

Distances on the small planetoid were short. An hour's flying at low speed brought the *Victory* over the emplacement of a group of islands of more dignified proportions than they had yet seen.

Many of them were joined together by narrow reefs. The Finnuis' leader explained that it was because of this that these islets had been chosen as the chief settlement of their people, since the fearsome foes of their race could not enter the lagoons.

Indicating one of the central islands with one finned arm, he told Telzon that there was a level space of ground there large enough for the *Victory* to alight upon. As soon as the door of the space-ship was opened the other fishmen with him flopped frantically out into the fresh air.

Nadja, following them, saw the whole surface of the nearer lagoons covered with excited Finnuis, who were threshing the blue wavelets to foam as they surged towards land. Savary turned towards Telzon.

"Tell them that we believe we can push the sea back from their shores, so as to give them more land," he said decisively.

BY now a half-dozen fishmen—evidently chiefs among the tribes—had emerged from the breakers and were panting up the slope towards them on clumsy flipper-like feet. Telzon rose and bowed.

"These are the head men of the leading and most advanced tribe," he said. "The oldest fishman says—in answer to my questions—that these islands are the summit of a mountain range, and that, for many miles round the ground has tilted up so that the waters are comparatively shallow. If the ocean could be lowered twenty feet, a vast area would be uncovered."

Savary smiled. "It will be simpler than I thought at first—but it will be no child's undertaking. Evaporating the water would be easy but it would return in the form of rain almost immediately. The only way is to hurl part of the ocean out into space or find some force to raise the level of the land.

The first seems the simpler since we do not possess control over the inner forces of the crust. Tell them that it will take us about a week or ten days to make preparations. Nadja and I can do most

of the work while you learn all you can about these strange beings."

Once his message was given he disappeared within the space-ship with a sign to Nadja to follow him. Telzon remained without, letting his old eyes drink their fill of the spectacle of waters and sun and clouds against azure skies.

The Finnuis' ancients came out on the beach to exchange their thoughts with him, and on a roll of delicate indestructible metal, he inscribed as much as he could of what they told him. That evening he read it aloud to Nadja and Savary.

The subtle and trained mind of the Lyddan sage had managed a fairly comprehensible reconstruction of the history of this new little world. Marinoe had evidently seen an evolution of life that paralleled that of Earth. From primitive unicellular forms, the chain of living had followed its slow upward course.

But Marinoe, because of its lesser gravity, was favorable to a more rapid development of life-forms of large size. The first fish forms to emerge and adapt themselves to life on dry land had been probably of a size nearly equal to that of the present fishmen.

The smallness of the areas surrendered by the sea, however, had prevented their race from ever becoming wholly land-dwellers. They had remained amphibians, more akin to Bactrians than to any other form of terrestrial life. Their gills, however, had already shown signs of atrophying amongst the more civilized tribes, when a great seismic catastrophe had rent their world, submerging the whole planetoid beneath the waves.

The few survivors of this convulsion had managed to re-adapt themselves through necessity. As generation succeeded generation, they were saved from returning completely to fish by the traditions of a wiser and better time that were handed down among them from chief to chief.

They had developed certain arts, such as thought-transference, which their underwater life rendered necessary, and the making of weapons from shells and stone. Out of the torpedo-shaped shells of some of their foes they had also made small boats, invulnerable to the attacks of even the sharpest-toothed of their enemies. These boats, however, were rare and were used only by chieftains and messengers. The masses of the Finnuis lived a life of constant and pressing danger which had developed in them a high order of initiative and courage.

SAVARY and Nadja were to find them on closer acquaintance a race of valorous and hardy savages. The seeds of a great evolutionary growth were in them, ready to germinate when given the slightest favorable circumstances.

"There is a vague tale among the wiser of their chiefs which relates that Marinoe was once twice as large as it is now," Telzon said. "All the half of her that was land was torn away, legend relates, and hurled into the sky and the seas that covered the other half poured over the wound that was made and covered it. I wonder if neighboring Reinos might not be the other half of this disrupted planet?"

"That would explain the comparative youth of Marinoe," Savary said. "If a planet thus torn asunder did not fuse itself completely back into its elementary molten condition it would at least return some odd million years backward along its life course.

"I think—given dry land sufficient for their safety and development, they can recover in a few generations the ground that they have lost since the catastrophe that hurled them back into the sea."

The old Lyddan leaned forward, the feathers on his bony skull ruffling with doubt.

"But can you do it? How can you remove the water from this world so that it cannot precipitate?"

"We will use a neutron-stream and hurl it into space as we did the robots," Savary said calmly.

The next morning, Savary rose with the red hush of a pleasant, Earthlike dawn. Stepping out of the space-ship,

he drew the keen acrid air deep into his lungs and felt a new vigor flow through his veins.

With folded arms he surveyed this budding world unfolding itself to the day. Marinoe was full of the pulsing promise of a manifold future. If Lydda and Speira could be returned to the realms of living worlds and the stored wisdom of their older races set to uses wider than mere planetary confines, what a nucleus of a vast and mighty empire they might prove to be!

A name sprang into his mind—a name half borrowed from the ancient history of his own North American state: The United States of the Asteroids. Nadja, coming from a brief swim in the delectable water to call him to the morning meal, found him staring across the sparkling sea with the still intensity of one who sees a vision.

CHAPTER XI

A New World

TURNING off the heat-ray that had been welding metal to metal within the workshop of the *Victory*, Nadja straightened and said with a sigh of relief, "The last piece."

Telzon deftly laid the shining section of stelumin away with its fellows in a rocketboat moored against the sides of the spaceship.

"Have the Finnuis followed your instructions, Telzon?" Savary asked over one shoulder.

"Yes—at dawn. They have evacuated the ocean bed and are gathered on every available islet and reef."

"Then, since we are ready, we might just as well start. Nadja, close the outer doors."

The *Victory* shot upwards and passed like an immense shadow over the seas. On the narrow reefs below, the tribes of the Finnuis crowded like swarming seals and shook and billowed in the tides of their excitement and worshipping terror. To them, the space-ship and its occupants were gods.

Savary had chosen a spot at one of the lesser depths of the ocean bed. He and Nadja had descended beneath the waves in a rocket-boat and carefully planed and grooved the ground in readiness for the small neutron-ray projector they had constructed. The final erection of the delicate machinery, was too precise an affair to be carried on under water and had been left till the final moment.

Telzon had added a number of Lyddan force-beam projectors to the equipment of the *Victory*. Under Savary's directions, he had worked during the last ten days at readjusting them so that they sent their powerful pulsations in a regular ring—a ring without gap or weakness—around the space-ship. Temporarily, they had replaced the heat-guns.

Now, as he settled the *Victory* slowly into the long surges of the sea, Savary carefully switched on these beams. Before the goggling eyes of the chiefs of the Finnuis, the strangest of spectacles occurred.

In a vast circle, the billows along the surface of the sea began retreating on themselves till, around the ship, a mounting wall of water was being pushed backwards under the carefully regulated power of the Lyddan beam. As the waters were pushed back on themselves, the *Victory* sank deeper into the opening gulf of the sea.

Bending over the vision-plate, Nadja and Telzon saw a vision of towering green walls, rising each moment higher, till suddenly, they met with a roar above the space-ship's head. Strange things of the innermost deeps writhed in the grip of the massed water-walls.

The keel of the space-ship grated gently against the ocean bed. Nadja and Telzon, already in spacesuits at the outer door, flung it open and sprang out. There was no time to lose! Under the impulsion of their small force-beams and their heat-rays, pieces were assembled and welded at full speed, cables and conductors connected with the power plant of the ship itself, the whole ready mass of

machinery made into a cohesive unit.

Then the two swung back into the vessel where Savary waited. "Four minutes to go," he said. "A close margin—but we made it."

His right hand flashed downward. On remote islands, the huddled Finnuis heard, at the same moment, a roar that sounded like the end of a world. Against the sky, a wall of water was trampling the waves beneath its onslaught. The wind of its coming beat and wailed in demoniac fury before its path. It came bearing in upon them, a doom against which neither man nor fish could contend.

Then, as they looked and cowered, its towering death seemed to halt, to stagger, to curl and bend back upon itself! The surface of the sea foamed and heaved and tossed but only an infinitesimal backwash of the gigantic turmoil came up against the low-lying reefs where the fishmen cowered.

AS Savary's hand flashed down towards the levers before him, those on board the *Victory* saw an even more awesome sight. From the hastily mounted projector on the muddy sea bottom, the neutron-beam flashed forth. Simultaneously the Lyddan molecular beam was withdrawn directly in front of it and the line of the upleaping spear of cosmic power was met by the headlong plunge of the fathoms of water pouring through the gap.

Savary had made this new ray considerably broader in its spread than those on Speira. Its force was adequate even to the terrible demands made of it. The Lyddan beam had held at bay all the massed pressure of the back-flung sea but the neutron-ray did more.

It hurled the downplunging wall of water upward in a gigantic column that reared ever higher above the surface of the seething ocean till it met and passed the clouds that milled in an angry turmoil on high. In one straight narrow jet the ocean of Marinoe was being hurled into the void.

The crux of his whole problem was timing—timing and the accuracy of his calculations. If a breach should be made through the repulsing rays the space-ship—inured as it was to the assaults of meteors . . . might yet suffer severe enough injuries to render them captives of the ocean they were battling against.

On the tormented surface of the sea, clouds and waves seemed to boil together in one common frenzy. The Finnuis huddled on their foam-spattered reefs under the bite of gales such as even their primordial world had rarely known.

Within the space-ship, time seemed to move as slowly as a stream of molten lead, but at last it reached its goal. Knute Savary's hands flashed downward. The neutron-ray vanished and the missing force-beam swept back to its post above. Nadja and Telzon sprang out, waist deep in the seepage of the ocean floor, and hurriedly dismantled the neutron-projector and loaded its pieces into the ship.

Then, with infinite care, the range of the Lyddan beam was shortened till the caverned walls of the sea hovered barely six inches above the spaceship. Then they were switched off.

Held beneath the cavernous walls of the back-bent seas, they saw the terrible rush and surge of churning tides bear down on them—then the upward leap of the foaming masses toward a remote surface. Around them the sense of pressure, of struggling captive power, was tremendous and awe-inspiring.

Nadja saw great ghostly shapes, half plant, half fish, glow in their deathroes behind the compressed wall of water. Now and again the bombardment of some vast body seemed to bend and partially repulse one of the force-beams, on which Savary's hand would dart from one lever to another until the equilibrium was restored. There could be no slackening in his watchfulness lest an error now nullify the whole undertaking and perhaps destroy the *Victory* itself beneath the tons of water that would cavern it.

Flashing between green walls of water, the *Victory* streaked up towards the surface through foaming depths. Ten minutes later, the space-ship floated

above the milling waves while the winds, disrupted from their usual currents, howled wildly around its arrogant bulk.

THE *Victory* skimmed over the tossing billows, over a changed world. Long reefs lifted where no reefs had been before. Seaweed-draped islets flung back the heavy battering of the surf that had covered them fathom-deep a few hours ago.

Fully a hundred square miles of land had been released from the sea. Innumerable islands that had had no existence before now waited—black and foam-fringed and darkly etched against the chaotic horizon—to be claimed as a people's home.

The savage fishmen's leaders fell at Savary's feet. The thing he had accomplished was beyond their understanding. For them it was the miraculous work of gods. Land, the precious land of their dim legends, was restored to them.

When they were finally alone within the control-room of the space-ship Nadja was laughing a little. "Do you realize that a mythology is being born? Five hundred years from now you will have become their reigning deity."

Savary paused, arrested by a new thought. "I wonder if something like this may not have been the source of some of our own myths—those that cannot be explained by ancestor or hero worship? Visitors from more advanced planets may have come to the Earth while our peoples were still primitive and left traces of their knowledge in the more ancient religions."

Telzon nodded. "Some of the dead worlds may have advanced to interplanetary travel before the airless doom cut their evolution short. If we find the sleepers of Speira we may learn something of such things."

Two days later the dead-black night of the airless void had swept them once more into its embrace. They sped out from the sea-wrapped world with their course laid on the last planet of the little group of asteroids. With minds refreshed by their contact with the youth and vigor of a young sphere till they seemed new people to themselves, they rested within the bright control-room, while through the minds of each swung the vast inexorable pageant of the life and death of worlds.

Within a short time Reinos, last of the five sister planetoids, rose like a dull silver disc across the field of the vision-plate, became moon-sized, then a swaying globe, that filled the plate. With the braking rockets hissing their song of flame, they entered the first atmospheric layer. Nadja took the usual tests. "Nearly the same atmosphere as Marinoe," she said.

Telzon ruffled his head feathers. "Another new world—probably Marinoe's missing half. Lydda will seem a tomb to me now that I have seen how fair a young world can be. The air of Marinoe has made me a half century younger. If this world is the same we may draw another renewal of vitality from the very contact of her soil."

Savary bent over the vision-plate. Beneath them, the roof of clouds rose ever closer, engulfing them at last in cool silver mists from which they emerged upon a world of sunless lush green vegetation, of silver rivers winding through dense forests, of tree-clad plateaus rising from vast swamps.

It was a steaming world of rising mists and tropical exuberance of growth at which Telzon cast one glance and said, "This world is smaller than Marinoe and has cooled more quickly. There must certainly be life within these forests."

Nadja said drily, "It may not be pleasant life—neolithic to say the least."

SAVARY pointed the *Victory* towards a green plain, perched high on the shoulder of a mountain range whose apex was a smoking volcano. They sank to the ground and Nadja made another more careful analysis of the atmosphere and found it heavy and rich but safe enough for their lungs. Telzon ventured to the doorway of the last airlock and stood sniffing the air dubiously. Suddenly, he shook his head and refused to venture out.

"This world is too violent for me. There is something here I do not like—some danger I can feel but not yet analyze."

Savary thought this over. As Nadja refused to stay behind while he explored the new planetoid alone, he suggested that they wear space-suits and go fully armed.

They decided that it was safe to leave their helmets open. As the airlock closed behind them Nadja was the first to fling her visor back and draw in a deep breath of the rich and heavy air.

They stood in lush grasses half a man's height, while below them spread the liana-plaited crest of an immense forest. Strange sulphuric odors drifted down to them from the waving plume of the volcanic cone in the distance.

Savary considered the scene. "We can explore in one of the rocket-boats tomorrow. We had better not wander too far from the ship today. Let us go to the edge of the plateau and see what view we can get. It is only a five-minute walk."

They went through the long grasses amid a swarm of small insects that rose in clouds around them. The ground was spongy under their feet. Above their heads, the purple cloud trailing from the distant volcano hovered like an eternal threat set over the land.

On the edge of the vast plateau where the *Victory* had come to rest the ground plunged away in a sharp fall that ended in a sea of violently colored verdure hundreds of feet below. It undulated to lower and lower levels till the vague mists hovering over the swamps it sheltered hid the further view.

Nadja shuddered. "I wouldn't venture down there for anything," she said. "Telzon was right. There is a sense of danger permeating this scenery. I—"

There was a cracking sound. Savary saw her sway against the verdure below. Then she was gone—whipped off her perch on the edge of the precipice by a long bluish tentacle that had shot out of the jungle hundreds of feet below and swept her with lightning speed into the impenetrable tent of jungle clothing it.

Her scream—rending the heavy air even after she had disappeared—was all that remained of her.

In that awful moment Knute Savary woke to the realization of all the slim Russian girl meant to him. For a second he rocked on his feet as he strove to lift his mind above the battering waves of his emotions. Then shrilling a frantic message to Telzon in the distant spaceship he pulled his helmet shut and, using his rocket-tubes as brakes, hurled himself down after her.

CHAPTER XII

Terros of Reinos

ONE thing only conspired to save the Earth-girl's life as she was dragged off the edge of the plateau into the violent verdure below. The immense tentacle that had seized her had wrapped itself around her in such a manner as to leave one arm partially free and she managed to snap her helmet closed even as she was hurtling towards an invisible destruction.

The remarkable tensile strength of the material of the spacesuit—a strength that could resist the vacuum of space itself—prevented the pressure of the tentacle holding her from affecting her freedom of movement within the suit itself or bruising her body. It had folded itself so closely around her, however, as to render her absolutely powerless.

Suddenly the light surrounding her changed to a green gloom that deepened as she sank below the leafy roof of the forest. Her sickened eyes beheld what looked like a mass of bluish writhing moss from whose palpitating surface myriads of waving tentacles rose and undulated. At its center, a dark hollow formed and enlarged itself as Nadja was drawn nearer. A kind of shapeless mouth quivered and widened under her horrified gaze.

The quivering maw was only a few feet away from her helpless body when

a fierce and sudden hooting beat in through her radiophone. Around her the moss-thing's countless tentacles were writhing and beating the air like frantic whips. A mighty grip had fastened on her shoulders and she beheld an immense rearing head, upheld upon a seemingly endless neck, and staring wheel-sized eyes that flamed down at the moss-animal beneath her.

Then the newcomer tore her free of the enfolding tentacle with a wrench that taxed to the utmost the space-suit's strength. Slipping her into a sort of pouch of skin under its neck it turned to wage battle against the tentacled monstrosity.

The girl made immediate use of her chance. As soon as she felt her arms released, she clamped her hands on the levers of her two guns. As the sounds of fury and battle began to lessen she turned her disintegrator ray against the heaving wall beside her and pressed its lever.

A hoarse howl of anguish followed the devastating destruction that ate into the flesh and blood around her as though it had been paper. The bulk that imprisoned her reeled and shook. Hastily, she swept the ray against the other side of her prison and saw it vanish like a dissolving mist.

Blood poured around her in a mighty spray as, with a spurt of her rocket-propeller, she hurled herself away from the dying monster whose collapsing bulk seemed to totter above her like a mountain about to fall.

She had a swift vision of the blue-moss creature writhing amid a welter of torn tentacles and whitish fluid on the ground far below. Then the impetus of her flight flung her violently through an aerial world of knotted vines and interwoven lianas, which oozed green juices as her passage ripped them apart.

The bough of a mighty fern-tree, green and elastic to the touch like any earthly frond, but as broad as the branch of an oak, halted her aerial passage. Clinging to it, she flung back her helmet and drew in deep breaths of the moist forest air.

A soft smacking sound behind her made her swing around. Something that looked like a giant white slug, a slug bedewed over all its undulating length with a foamy pinkish ooze, was moving toward her along the branch immediately above her head.

It was fully the size of a rocket-boat —some ten feet long by half as many wide—and Nadja saw that should she ray it with either of her guns its viscous bulk would drop directly onto her during its death throes.

Before it could reach her, however, she touched the lever of her rocket-propeller and hurled herself once more in a vast leap through the jungle growths. There had been no time to shut her helmet, and the tendrils of the vines whipped and lacerated her face as she plunged through them.

Suddenly, she was halted sharply by an impact against something both soft and elastic. Struggling to lift an arm, she found that a delicate filament of shimmering greenery weighed it down with a power out of all proportion to its slimness.

Turning her head, she saw that she was enmeshed in a sort of web of these filaments—woven like a spider's net—that stretched for hundreds of feet on either side of her.

ANOTHER filament fell down upon her, then another. After a time of waiting, a strange being swung into sight along one of the larger cables of the web. A second followed, and then they seemed to swarm around her.

Hairy things like apes and little larger than a man, at first glance they had a reassuring likeness to earthly forms of life, till a second glance showed her that their further equipment of arms and legs—on which they moved deftly over the swaying cables of the web—rendered them more like immense hirsute spiders.

Their faces were round and smooth with a fringe of hair around the chins and a monkeyish cast of features but from their bodies protruded eight appendages, ending in prehensile claws or fingers which seemed to possess the ca-

pacity of both winding themselves around an object and clinging to it as a fly does with the pads of its feet.

The slanting black eyes that stared at her seemed less rapacious than curious, as though the minds behind the round foreheads possessed some capacity for thought. Yielding to an impulse, she waited before having recourse to her guns. Though she could move neither arm nor leg, she could still use either of the rays within a limited radius.

These spider-men of Reinos were not wholly repellent to her. It seemed to her that indication of some burgeoning intelligence was already visible in their eyes and faces. One of them, she saw, was a female and carried a tiny baby creature cradled in two of her hairy arms.

The spider-men seemed equally ready to stay and examine her. Her conformation was near enough to theirs to give them food for thought. Their numbers increased, growing more numerous minute by minute while she hung there, but no overt act had ensued to break the pause between them when the peace of the upper levels of the tree-tops was rudely shattered from below.

A shrill hooting rose from the veiled jungle depths below. Immediately a wave of panic seemed to sweep over the spider-folk. The female with the baby fled towards the invisible upper reaches of the tree-crests at dizzying speed and two-thirds of the others vanished at her heels.

Before those nearer the girl could follow their example a ghastly gory head thrust itself from the shaking foliage beneath, and thin screams of hopelessness rose from the cowering tree-folk.

It was the head of a snake of mastodonic size; horned like a rhinoceros and borne on a long undulating neck, from which sprouted, far down near the foliage, strange webbed limbs—half claws, half wings.

Beneath the horns the thing's dead black skin was studded with small knobs from which bluish sparks emanated to burn away at a touch the filaments of steel-strong web around her.

Nadja saw one of the spider-people come within the range of this crackling glow and stop its mad scramble to some higher safety to remain in a sort of paralysis, waiting while the awful snakelike head turned and reached for it with jaws that dripped already from the aftermath of some horrible feast.

At the same time she saw, a hundred feet below, a squat and gigantic limb draw itself out of the underbrush and hitch itself a score more feet up the tree to which it clung while its webbed forelimbs or wings lifted its crackling head to a still higher point of vantage.

In three gulps it seized and devoured as many hapless spider-men before the bonds of horror set upon the earth-girl's muscles by the gory apparition snapped. The horned beast was turning lazily in her direction when she gave it the fire of both her guns. Under the united blasts of the heat-ray and the disintegrator the web around her melted like mist and only the strands flung across her hands and shoulders held her above the invisible ground.

The lizard-monster never knew what hit him. One minute his lolling head was dripping blood above the cowering tree-people—the next, the long neck collapsed, severed just below the eel-like jaws. The heat-beam glowed for a brief moment around the horn-tipped head before it fell—a black and shriveled cinder—into the green gloom whence it had come.

Even as the spider-men were shiveringly realizing that their doom had been somehow defeated, Knute Savary was fighting his way through the steaming depths of the primordial forest below. Above the tree-tops Telzon, in answer to his orders, was already speeding in one of the rocket boats, scanning the impenetrable forest roof for signs of Nadja's possible survival.

It was the thought of the mighty protection that the girl possessed in the strength of her space-suit that gave Knute Savary hope as he plunged through the steaming air.

It was for the sound of the spitting heat-ray that he listened, even as his

falling body cleaved the matted forest beneath him.

THE moisture-laden depths of the Reinos jungle possessed a green darkness akin to that of the sea bottoms. Their swampy tangles of immense ferns squirmed with fierce life. Even the vegetation had a rapacious aspect.

As Savary plunged down and down like a living plummet into the endless foliaged levels of the leafy sea, strange claws and tentacles shot out to intercept him—whether of voracious fauna or flora, he passed too swiftly to know. The blaze of his heat-gun burned them to cinders before he had shot past their lairs.

At last he felt the soft squelch of breaking ferns and branches succulent with sap, then the yield of a spongy soil under his feet. For perhaps ten minutes he walked over the steaming moss before the life of the lower jungle became aware of him.

Suddenly, as he walked, he felt something wrap itself around his feet and swiftly enmesh him to the waist. Looking down, he saw a gaping mouth—a green cavern of spume-filled gloom—opening almost under his feet while the livid folds of what looked like some immense ectoplasm, greeny-white and slimy, undulated and pressed upwards around him.

Half vegetable, half animal, it spread in a semi-growth for hundreds of feet around in a flat layer almost indistinguishable from the surrounding soil. The blast of his disintegrator seemed to tear its very center out of existence.

Viciously raying the remains of its loathsome bulk, Savary walked on with added care, only to halt again as a ghastly scream of death and terror followed by horrible crunching sounds and gobbling noises arose from somewhere behind him. The next instant the silence was again shattered, this time by faint sounds of battle in front of him.

For a moment his heart quickened in wild hope and he leaped forward, then checked himself again. The sounds ahead were no noises of scientific battle but the older cruder sounds of primitive combat—snarlings and hootings and hoarse, horrible rendings of flesh and muscle under massive teeth.

Creeping forward cautiously, he came upon an epic struggle between a batlike horror, fully fifty feet in diameter, and a two-legged being with a blue hairless skin. Like a man, or rather like man's ancestor, was this the man-ape—it had horns like a bull and gigantic proportions—fully twenty feet in height and broad in proportion.

In the center of a small clearing, the two creatures were locked in a struggle to the death. It was clear, however, that the winged being possessed a distinct advantage of armament. As Savary came upon the scene the two-legged being sank to its knees beneath the rending attack of the bat. But its arms still held the winged horror close to him with a despairing courage. A female of the ape-giant's species cowered on the ground behind him with a babe at her breast.

In a quick onrush of sympathy Savary flung up his heat-gun and rayed the head of the batlike monstrosity as it reared away from the blindly wrestling giant. It screamed once—a high, unearthly howl—then collapsed like a pricked balloon. Streaming with blood, the ape-man stumbled to its feet and stood swaying, terribly scarred and torn, but with defiant eyes turned upon what might be a new foe.

Savary felt a sudden sympathy for the undaunted giant. Standing quietly where he was, he flung all his mind into an effort to impress his friendliness on whatever brain the immense creature before him could possess. For a steady minute he stood and sent his thoughts beating out towards the vast blue shape watching him.

Suddenly—with startling unexpectedness—he felt an answering thought take shape in his own mind. A stumbling thought that said dubiously, "Friend? Small ape? Friend?"

Savary held his arms wide—the ape-man would not realize that a heat-gun was still prudently clutched in one hand—and walked slowly out into the clear-

ing. The giant looked uneasily at his mate and then back again at the Terrestrial but he did not attack.

Pausing only a few feet away, he drove his mind to the task of impressing images on the slower minds of the creatures before him. Punctuating the process with the thought of his friendliness and his need of their help he flung a mind picture of Nadja at them—of Nadja writhing in the clutches of the giant tentacle that had snatched her away from him.

The ape-man relaxed. Turning, he made a sign to the female who rose nervously and drew near, protecting her little one with both massive arms. They towered like trees above the Earth-man but the slow and fumbling messages of their minds showed them to be of a much more advanced mental development than Savary had dreamed possible in this nightmarish world. When the male giant leaned down and lifted him up, setting him on one massive shoulder, he made no objection.

CHAPTER XIII

The Ape-Giants and the Spider Men

SWINGING up into the trees, the two blue giants flung their mighty bulks from one gigantic bough to another till they emerged upon a rocky peak that rose above the dense jungle growth into clearer and purer air. Here a stockade of giant logs rose fifty feet, woven together by lianas of the thickness of ordinary trees.

A dozen other ape-giants moved about this defended area, two or three males and a half-dozen females with twice as many infants. Some three miles away the lip of the plateau where he had stood with Nadja loomed up out of the violent verdure around.

Drawing the wounded ape-man's attention there, Savary pointed out what he thought was the approximate location of the spot where she had disappeared and painted a new picture of the tentacle that had swept her away. The blue giant nodded.

On Savary's mental vision, the image of the moss-creature impressed itself slowly and bunglingly. Horror deepened in the Terrestrial's mind. Was this the loathsome end to which Nadja Manners' self-imposed exile had brought her? Calling once more on all the resources of his powerful mind, he begged the ape-man's help.

A maddeningly slow interchange of thought-images followed. Knowing nothing of their language and lacking Telzon's power to assimilate any new tongue instantly, this was the only way he could talk to them. At last—as in earnest of his power—Savary drew forth his disintegrator and turned it on the crowding jungle beneath.

The sight of a giant fern-tree dissolving into mist produced a decisive effect. With a half-dozen of them as escorts, he was soon swinging through the high levels of the jungle-world till they paused above the sanguinary scene of the combat between the pouched animal and the moss-creature.

Renewed hope sprang up in Savary's heart as the awful spectacle of death and destruction greeted his eye. The mark of the disintegrator ray was clear on the terribly wounded hulk of the pouched monster. Nadja might still be somewhere in the pathless jungle, holding her own.

Darkness was falling fast. The jungle depths beneath him were already plunged into deepest night. It was impossible to look farther that night.

When Savary refused to return with them to the stockade of their tribe the friendly ape-giants wove nests of lianas above the shadowed depths of tangled foliage and settled with him for the night. As the darkness grew deeper and Reinos plunged into her night, strange roars and hoots and howls and ominous crunching sounds arose from the blood-drenched depths of the fern-forest beneath them.

With tensed nerves, Savary lay above this invisible scene of carnage and blood

lust waiting only one thing—the coming of the dawn. His impotence—while somewhere Nadja might at this very moment be fighting for her life—was a torture that stripped the essential humanity in him to the quick.

The flare of rockets overhead told him that Telzon was returning along his trail of earlier afternoon. He sent his call winging silently up into the night sky and saw the rocket boat dip and plane down towards the tree-crests where he swung beside the blue ape-men.

Crashing through the upper leafage, it settled heavily in the crotch of a giant tree, setting another one on fire with the last flare of its rear rockets. In a panic the ape-men fled through the upper branches. Only the wounded giant he had saved from the vampire-beast remained, cowering beside him.

One of the giants slipped as he hurled himself through the night-wrapped boughs and a horrid roar of triumph arose from the dark depths beneath as his bouncing body dropped into some waiting maw.

The Lyddan's ancient nerves cringed at the sound as he used the ray from his forcebeam belt to waft himself to Savary's precarious perch, where he reported a vain search over the forest summits.

The Earthman said, "There will be a trail of sorts leading from here. If she wasn't killed within the first minutes of surprise, she may still be—"

He stopped. In the darkness beside him, the little birdman had started sharply.

"Someone is sending out a mental message!" he cried. "It is Nadja! She is trying to tell us she is safe!"

Savary's mind now seized the message which the Earthgirl had been trying for hours to transmit. Telzon—under his directions—flung back a thought-description of their location and Nadja's answer came clearly across the indeterminate space between them.

"It is too dark now. I will get the friendly creatures I am with to lead me there tomorrow at dawn."

Immediately, d e s p i t e the hooting roars and grim sounds of death and carnage rising from below, Knute Savary fell into the dreamless sleep of infinite relief. Regaining the greater safety of his rocket-boat, the old Lyddan elder soon followed his example.

An angry chorus of snarls, beating down upon them from the heights of adjoining trees, awoke them both in the gray and early dawn. Above the steaming world a white light was slowly waxing. The ape-giants had rejoined them and were answering the challenge with low menacing growls.

The boughs beyond them were swarming with strange hairy beings that seemed by their agility to be invested with unnumerable legs. Suddenly Nadja's clear voice rang across the leafy gap that separated them.

"Savary! Telzon! Are you with these giants?"

The ape-giants suddenly uttered a terrified shout. As though the Earthgirl's voice had been a signal the great tree among whose branches Savary swung seemed to heave and shake like rushes in a gale.

The blue ape-men clung to it, but the Terrestrial had loosened his hold of the nearby boughs in his eagerness to greet Nadja and the first vast shiver of the tree sent him hurtling downward through the leafy sea. Telzon—bending terrified out of his rocket boat—saw an enormous claw reach out of the misty, verdant depths and seize on the spinning Earthman's form.

A great head with a parrot-like beak upreared for a moment from the agitated roof of ferns, then disappeared. Some vast bulk threshed its way through the undergrowth, bearing the stunned form of Knute Savary in its clutch.

IT was the threshing of the branches against his uncovered face that lashed Knute Savary unconscious as he fell. When he came to himself he was being borne through the phosphorescent dawn-dimness of the forest depths. The clasp of a mighty claw held him helpless and a foreshortened view of the folds and wrinkles of an immense and scaly

neck explained the situation to his waking mind.

Suddenly, the thing stopped, upreared itself till Savary was lifted some fifty feet from the spongy ground and turned an awful beaked head upon its helpless prey. Eyes like cartwheels blazed greenly through the twilight of the underwood, and the great beak plunged down upon him like the open maw of some terrific cavern.

The space-suit held as it clamped over it. Savary looked upward at the roof of an awful gullet as the beak closed over his head, locking him in a fetid darkness and pouring the foul poisonous breath of the beast through the open visor. Struggle as he might, that noxious breath began to overpower his still-shaken senses like a poison gas. Then he lost consciousness.

Back at the rocket boat, Telzon and Nadja stood staring in appalled horror at the waving tree-tops. The little feathered bird-man recovered his senses first. Nadja had flung herself across the leafy gap between them with a spurt of her rocket tubes and stood white-faced, staring down at the green depths below, while the ape-giants cowered and mouthed in alternate rage and fear.

The snarling of the spider-folk had stilled to a dead silence, and Telzon picked their terrified thoughts out of the intervening air. Turning on the blue ape-men, he beat in on their minds that the woman beside him was the mate of the man they had served and that she was to be obeyed if that man was to be rescued. He turned his thoughts on Nadja.

"Follow with them and your own creatures as fast as you can," he said. "This rocket boat holds only one."

With a roar of rockets, he was off on the trail of the monster while Nadja, turning on both apes and spidermen, ordered them to lead her through the upper tree-crests along the path the parrot-beak had taken.

Even as the great beast roared in rage at feeling his jaws slip off the Earthman's space-suit the old Lyddan heard it and headed the rocket boat towards the sound. Ramming the small craft through the fathom-deep foliage, he sought to drive his way down to the corpuscular world where the monster stood, but the boat caught in a tangle of mighty boughs and wedged itself firmly.

Leaving it, the little birdman sprang valiantly down into the green nether-gloom and soon beheld the flaming enormous eyes and gigantic beak of the pachydermic monster below.

It was fully a hundred feet in length, equipped with a tremendous tail, which it used to lift itself to nearly its own length in the air, possessed of clawed limbs strong enough to shake even the strongest tree in this mighty forest. In a frenzy of rage it reared and threshed the plowed forest-path while it shook the inert form of Savary savagely.

Hanging from a branch above it, the birdman aimed his disintegrator at a spot close to the beast's neck and fired. But the weaving of the giant head disturbed his aim and the ray scoured a terrible wound across the pachydermic shoulders, maiming, but not killing.

With a screech the giant animal hurled its whole bulk straight into the air. A shake of its head sent Savary flying off into the underbrush to one side while its rearing mass of flesh and muscle attached itself with mighty claws to the nearby trees as it looked about for the cause of its terrible injury.

Telzon fired once more, even as the mountain of flesh reared above him. As he fired the tree-shaker saw him. The disintegrator-ray met its charge and drilled a death-giving hole through its extended and enormous throat.

Nadja and the ape-giants, swinging at a dizzying pace through the treetops, saw the forest roof ahead sway and bend as though in the grip of a cyclone, and heard the horrible death-howl of the toppling beast. The vast bulk leaped straight up into the air—and down, sweeping the little birdman earthward beneath its collapsing mountain of flesh!

When they arrived the last death spasms were convulsing its expiring bulk. An ape-man swung himself to the ground at a safe distance and raised a

howl of triumph as he found the unconscious form of Savary caught in some boughs near the ground.

It was another, who, by the signs of the broken trees and branches around, read what had happened to Telzon. But it was two hours before the united strength of the blue ape-giants, aided by the steel-strong filaments which the spider-folk spun at Nadja's command, managed to lift the mighty body sufficiently to allow Telzon's senseless form to be removed.

THE space-suit had held but when they carried him to the rocket boat and got him out of it, they saw that his delicate and ancient form had not been strong enough to withstand the ordeal. While the ape-men sang a savage chant of triumph over the dead body of the monster below and the spiderfolk chattered in the remote tree-tops above, he came back to consciousness and smiled weakly at the two Terrestrials.

"Tell them on Lydda that Telzon died as our ancestors used to die—in action," he gasped slowly. "They will send you other Older Ones to help you for my sake if you should need them.

"Bury me on Speira—make my tomb a monument to the first planet to be lifted from its age-old airless grave. Do not grieve over me. I have had more adventure in the last months of my life than my race has had in generations. I am content."

Nadja bent towards him with tears in her eyes. "You must not die, Telzon," she cried.

"We will get you to the ship," Savary said urgently. "Once there our drugs will mend you."

The old bird-man shook his head weakly. "It is useless. Our Lyddan birdbones were fashioned too slightly for the violence of this terrible world. I am glad I saved you, Savary." Telzon used his last flicker of energy to communicate to the savage beings around them the orders of the powerful strangers who had come among them.

More clearly than any of the two Terrestrials could have managed to do it, he told them that their two species would be made the lords of Reinos if they obeyed Savary and made eternal peace with each other.

"This being will give you some of the weapons that can destroy your foes in a flash," he said. "And if you obey him he will return if he can to help you further when his work in the skies is done. You must never, however, use these magic weapons against each other or great evil will befall you."

His thoughts began to falter. Suddenly his eyes closed, all his feathers quivered, and were still. Telzon of Lydda was no more!

Another day gone. Within the spaceship, Savary and Nadja sadly sealed Telzon's frail body within a gleaming stelumin shell for burial on Speira. They would leave at dawn.

Under the glassite dome of the observatory Savary stood with the girl who had followed him into exile. He had told her of his love, had seen her face change and tremble from its mask of restraint into the radiance of happiness.

Savary spoke. "The ape-giants and the spider-men will live in peace till we return, I think, and the disintegrator rays we have given them will help them."

Nadja smiled a little. "They think them weapons filled with imprisoned lightning. They will undoubtedly guard them as fetishes to be used only by their chiefs or priests—when they reach the stage of possessing priests."

Savary nodded. "They will last for hundreds of years with care."

They fell silent. Through the open radio-receivers of the ship, the voice of Reinos mounted towards them from the darkness shrouded depths below. The pageant of organic life was moving on its wasteful, bloody upward way.

CHAPTER XIV

The Revival of the Speirans

AGAINST the star-beaconed abyss of space Speira glimmered like a sphere of mother-of-pearl. Nadja

touched the lever of the braking rockets almost instinctively. She felt an odd thrill in her heart at this approach of the little world, which was the nearest thing to home they possessed in all the immensity of the void.

Savary bent toward her. "Aim towards the shadow-band, Nadja," Savary said. "We must approach on the side where night rules, so that we may switch off the neutron beams while they are inactive."

Within both their minds, a paramount question ruled. Would they find air on Speira or only the eternal barren wastes of a dead and finished world? The keel of the *Victory* skimmed over the space-frozen ground, then settled as Nadja picked out her landing place, throttled the rockets to a mere trickle of flame, brought them to rest close to one of the inactive solar-machines.

Savary bent over the atmospheric-tester. Suddenly he straightened. His eyes flashed triumphantly.

"Speira has an atmosphere once more!" he said. "It is too rarefied to support life as yet but the neutron-beam has done its work—we can switch it off. Speira is drawing her atmospheric envelope to her from out of the void!"

Clambering swiftly into their space-suits, they hurried out into the night. As she looked around her, however, Nadja felt an unreasoning sting of disappointment. Nothing seemed to have changed in the lunar scenery.

Death, not life, still ruled. Mechanically they walked past the inactive solar-machine, in whose cold mirrors the frozen flares of the reflected stars burned palely across the seamed soil and up a crevassed slope. Nadja felt that the test-tube of the atmosphere-reader must have lied.

But Savary, standing at her side, suddenly uttered an exultant shout. At the very bottom of a deep cleft in the crumbling stone, his headlamp was shining on a crystalline glaze, a powdering of almost impalpable snow—a dust of fine caked crystals whose meaning was LIFE!

As she stared down at it, she knew that Savary's theories were proven to the hilt. Henceforth, man's hands would hold the power to resuscitate the dead worlds of his system and to turn the airless doom back from those that were still alive.

The solar-machines were turned off. Some day, perhaps, they might be used again but their work was done for the moment. Small Speira, vibrating with an ever-increasing vitality, was daily wrapping herself closer and closer in her refound air.

Bemused by the wonder of what was happening around them, the Terrestrials built a tomb of green metal for Telzon, high upon one of the frost-powdered peaks, then dallied in almost idle living while they watched a new miracle of nature take place.

They were not inactive, however. There were many minor preparations to carry forward. Savary prepared a plan for a space-ship that would be a smaller edition of the *Victory*, which they intended asking the Lyddans to help them build and by which he hoped to take to Earth the knowledge that would avert the doom creeping upon her.

They studied the dead language of the Speiran manuscript and experimented with the many chemical formulae that the old bird-man had left them. The formula for the life-prolonging elixir of the Lyddans was among these—a formula that almost completely immunized the organic frame against bacterial attack.

Next in importance was the formula for a milky cloudy liquid over which the little birdman had worked for days while the solar-machines were being built by the robots. He had told Savary and Nadja at the time that this was an improvement on a formula long known on Lydda where suspended animation and methods of dispelling it was an old part of their knowledge.

"If we ever find the cataleptic sleepers of which your ancient manuscript speaks, Savary," he had said. "This should be useful. I have worked on it with care. It is, I think, a liquid that is the next thing to the nutritive process of life itself."

MEANWHILE, and weakly, the transformation intensified itself around them. Slowly, they saw the sky of daytime pale from airless black to midnight blue, while the glaring, untempered sun became daily less fierce, as the thickening atmosphere softened the scorching power of its rays.

One morning, after bending for long hours over the atmospheric-reader, Savary pronounced the air dense enough at last for human lungs. That evening it rained. Nadja was enjoying the pleasure of moving freely, without the constriction of a space-suit, about this reclaimed ghost of space, where no living organic being had breathed a life-giving air since immemorial time.

Warmly wrapped against the bitter cold that swept down at the coming of night, she stood on a nearby peak, watching the brief dusk-glow color the great bulk of the *Victory* below her. There had been a heavier than usual deposit of brittle snow the night before, and the thirsty sun had melted it and lifted it skyward in thin mists that were the first clouds Speira had known in half a million years.

At sunset, the spreading moisture condensed and drifted down—a brief thin rain that swiftly changed to snow. Next morning, when the sun's rays beat down once more upon the little world, small pools of water, too deep to be instantly volatilized gleamed like new-born jewels in the deep hollows of the eroded rocks. Water had come to Speira at last!

That evening, Savary said, "Tomorrow we must begin our search for the sleeping youth of this planetoid. Afterward—"

Nadja turned on her deep cushioned seat and smiled into his eyes. "Afterward—what then?"

"We will go to Lydda and ask the Older Ones to unite us with all ceremony and dignity, after whatever fashion they use. We must finish our tasks before taking time for love. Then we shall build another *Victory*—one unshackled by repellum—and fly to Earth with our warning and way of escape."

On the morrow they brought the space-ship itself to the dust-buried plains before the city of the forgotten race. Once more space-suit clad against the airlessness of the underground depths—they passed down that deep-plunging flight of stairs and through the pillared hall where the old inscriptions of a happy world dreamed on the lintels of earth-blocked doorways.

The dead ancients of Speira still sat in their lambent arched niches. When the outer air reached this buried room their mummified remains would cease to be. Having outlasted a half-million years they would crumble into dust at the first breath of that revivified world for which they had waited so long.

Under the spell of the eerie light's ghostly radiance, they made a complete examination of the circular room but it seemed to hold no trace of a doorway of any kind. At last Savary spoke wearily.

"I suppose there is nothing else to do but to start a thorough investigation of every one of the passageways leading out of the great hall. That will mean the work of weeks."

Nadja was assenting dispiritedly when her eyes fixed themselves upon the central floor. "Isn't that a dark line?" she asked sharply. "See. It is roughly square in shape!"

Savary bent and ran a hand over the spot. "The floor blocks are slightly unequal," he said. "Perhaps we can lever them up with our force-beams."

UNDER the tractor-beams of their Lyddan belts the block of copper stone lifted slowly. Beneath it a narrow flight of glowing steps led downward to a low vast hall, where the same pulsing glimmer moved fluctuatingly over the walls and floor. Ranged in a quadruple row down the chamber's length were the serried ranks of a hundred and twelve long metal troughs.

A sheet of transparent but very thick substance covered each trough or bath. Beneath this, a clear liquid enfolded a stripped and colorless form, snow-pale and yet with no sign of decay about its firm contours and youthfully muscled limbs. For the first time, they realized

how beautiful had been this race of the asteroids!

The light bodies of the girls had a fairy-like delicacy that the sculptures on the pillars of the great hall had only vaguely indicated. The austere beauty of the young men's features was molded in classic regularity. Their two-thumbed hand had a strange grace, even in their torpor or death, while something beyond mere loveliness of shape and line informed their tranced unconsciousness, as though the spirit within each form had made itself a sheath of almost transparent beauty.

Nadja hung with bated breath above them. "How beautiful they were," she said softly.

"How beautiful they *are*," Savary corrected. "And brave as well, to have resigned themselves thus to such a sleep."

He frowned in thought, looking down at the frozen sleepers. "I think it will be simpler to lift them out of their solution and transport them to the ship. We can bring them out two by two, incased in airtight shells, since who knows how delicate their bodies may prove to be?

"After awhile—if they revive—the first to come to life should be able to lend us a hand with the others."

* * * * *

It was the fifth day since the sleepers had been found. Coming to the doorway of the *Victory*, Nadja looked up at the brightening stars. A soft new dusk was sinking down upon the quickened asteroids. Within the space-ship, ten of the Speirans reposed within deep baths of Telzon's life-giving solution. That evening, the first two they had removed from their underground tomb were to receive the final injections that were to bring them completely back to life.

As she drew in deep breaths of the keen thin air, the Earthgirl felt the brief caress of the light rain that came now every evening at the setting of the sun on Speira. Suddenly, she felt a movement, like the stir of a sleeper about to awaken, run through the thin air around her. In the reflection of the sky mirrored in a small pool at her feet, the blur of a trembling ripple broke the light as the first breeze of Speira soughed softly through the gathering dusk.

At Nadja's call, Savary came to the doorway of the ship and felt the cool kiss of the stirring wind against his cheek. "Our asteroid's first wind," he said. "Soon we will be having more rain than we want as the river and sea beds receive their waters back from the sky. But come, Nadja, we must wake the inheritors of this reborn world."

WITHIN the laboratory of the ship, the rubber baths of the two first Speirans they had removed from the underground hall waited under a flood of brilliant light. When they been lifted from the immediately volatilized baths of liquid air in which they had lain for so many countless years, their bodies had been as stiff and brittle as glass.

Now, touching the arm of the man lightly with one finger, Nadja spoke in a whisper, "It is soft and yielding."

Savary nodded. In one hand, he held a flagon of the restoring fluid which each of the sleeping figures had held clasped in its hands. He was a little pale. Slowly, the slender silvery needle ready between his fingers, he bent towards the man lying in the life-giving fluid before him.

Saalvor, prince of Speira the once-fortunate, felt light beat against his weighted eyelids. There were voices murmuring near him, but their words were undistinguishable. Somewhere there was the sound of a woman's sob.

He had slept, he thought, and forgotten for a brief moment the horrors that were overwhelming Speira. The counselors of his father had probably given him a drug, for sleep had become a rare thing in the thin air that still clung to the lower depths of the dying planet.

Now he must awaken and die with his race. He struggled against the weight—heavy as the hand of time—that seemed to lie on his eyelids. Slowly they fluttered and opened, closed, then opened again.

He was lying on a soft couch in a strange bare place and two beings such

as he had never seen before were bending over him. One of them held a warm and pungent liquor to his lips, which he swallowed automatically. It was a woman.

The other figure laid a hand reassuringly on his bare shoulder. He spoke in a voice that possessed both power and kindness. "Rest," he said. "Rest and remember. You have been asleep for many thousands of years."

Strange warmths and chills—a sudden onrush of life as though long dammed tides were springing forth from their shackles were coursing through his quickening flesh and wakening the powers of his mind. Memory slowly dawned upon him.

Above him the voice of the man-figure fell compassionately toward him. "Your mate is waking beside you—she who slept by your side, whose capro-vial inscription names her a princess of Speira. I am leaving you the manuscript written by your ancient sages, whose wishes we have striven to fulfil.

"Time has flown by—how vast a stretch we shall never know—and your world has refound its air, is ready once more to support life. Others of your race wait their awakening and we need your help. We are friends who have come from a distant world. Now we will leave you to get used to your refound life."

Hours later, the Speiran prince stood by Knute Savary's side in the doorway of the space-ship, watching the slanting beams of the rising sun light up the desolate splendor of his devastated world. As the terrestrial had expected from the perusal of his people's writings, the Speiran's mind was the keen, lucid and controlled intellect of a member of a highly advanced and developed race.

His sleep of centuries had apparently left his body unweakened and vigorous. Once nourished and clad in some of Savary's garments, he had asked to see the other sleepers of his race now waiting their revival on the space-ship.

The grave beauty of his face had not changed, but some terrible sadness shadowing the depths of his eyes had made the earth-man lay a hand on his arm and say, "Yours is a vast and lonely task, Prince Saalvor—the reclaiming of this world for your race. But we will help you. All the resources of the *Victory* shall lie at your command. You and the lady Ydrissa and the youths who lie here may yet learn to be happy even though the world you knew has sunk beneath an ocean of time."

NOW, as he watched with a white, still face, the bleak and changed presentment of his world, Saalvor saw Ydrissa leave Nadja's arm at the door of the space-ship and move shakily to his side. His arm encircled her airy grace.

"Ours is a strange destiny, Ydrissa, but we must fulfil it," he said. "Our race shall live once more and reclaim its reborn sphere."

Turning to Savary, he held out his hand in imitation of the gesture used by the Terrestrials.

"You have done what even the most brilliant scientists of my people deemed impossible," he said. "Tomorrow, when I have faced what we have to face with a less shaken mind, I will tell you of the Speira that once was our world. Our world which we can never again know. Today I have no words."

Savary spoke gravely. "Time will make it easier, Saalvor. When your comrades are awakened we will clear the dust of ages away from your city so that its ruins may serve you as dwellings till a newer town can be built. In a few years, you may be able to grow harvests from the reviving ground.

"From the luxuriant vegetation of Reinos we shall be able to bring you the seeds of fruit and grain-plants and from the rich seas of Marinoe we can bring you fish for your streams. In the meantime, the stores of the *Victory* are well provisioned enough to feed you for at least a year."

As he spoke, Speira turned fully into the arms of the day. To the Terrestrials who had lived for so long on the airless world, with its black sky and untempered sun-heat, it seemed fair now and full of promise.

But Ydrissa, with a half sob, said, "And that is all that time has left of what was once so fair? Can that crevassed valley have been our blue sea, Saalvor? And those lumps of sunken metal our great city?"

Nadja flung an arm around the Speiran girl's delicate figure. "You shall see how quickly it will all be reborn," she cried out. "With Knute Savary to help you, you will soon have recovered your world. There will be green things growing once more and sparkling waters and birds on the wing before your children are grown to manhood. It is only the first few years that will be hard."

Saalvor took Ydrissa's hand in his and smiled sternly. "In any case, we have no time to waste in vain repinings," he said. "We must carry on the task that our race has set us. Tomorrow we will help you to waken our comrades who are still sleeping. Afterwards, we will work, Earthman. This world you have brought to life and we who once possessed it, are yours. You are Speira's rightful ruler."

Ydrissa added softly, "We know already that your sympathy will help us. May your Earth in its need find such as you to repay it for what you have done."

CHAPTER XV

The Things from the Black Moon

OVER the barren plateau of upper Tibet the cold flare of the indifferent stars brooded in a moonless sky. Only the little stratosphere-station marked the existence of Man on those night-ruled wastes. But no light gleamed from its closed window.

The shadowy Himalayas on the remote horizon alone beheld the swift passage through that silent night of a great gleaming cylinder from space and its quiet hovering over the unlit landing-field below. Its repellum plated hull replaced with one of green and invulnerable vulcan, the *Victory* had returned to Earth.

Using the Lyddan force-beam as a brake, Nadja brought the arrowy space-ship to a gentle landing. She stood up with a heavy roll of metal-paper in her hand and looked longingly at Knute Savary, who was staring with folded arms at the night-wrapped scene within the vision-plate.

"You are still decided, Knute?" she asked pleadingly.

"Anything else is impossible, dear. Once this package is in the hands of the air-guard of this station our duty towards Earth is done. Earth sent me forth to a spatial exile to ensure, past all peradventure, that I never return. You may stay if you wish. Man has no quarrel with you. But as soon as my message is delivered, I return to the paths and adventures of space."

The girl sighed. Leaving the room, she let herself out through the various airlocks till firm terrestrial soil lay under her foot. A young half-clad air-guard had flung himself out of the small station and was staring at the frosty green bulk of the space-ship. She laid her roll of manuscripts and diagrams in his hand the while he stared, speechless with astonishment.

"This is for the World Council—in all haste. On your honor as an air-guard, take care of it—the life of the world depends on it."

She stepped back into the aperture of the narrow doorway. Her eyes swept the vague outlines of the night-ruled plains hungrily. Some strange sense of menace—something ominous in the darkening air—struck through the emotion the touch of her own world's soil underfoot had stirred in her.

She turned back to the man before her. "I am disobeying orders," she said quickly, "but if Earth's need should ever become great, remember two words—the Asteroids. Perhaps they may help you."

The door clanged. Lieutenant Carl Gordon of stratosphere-station 478 saw the mighty cylinder before him lift skyward on some invisible propulsion till it hovered a hundred feet above his head. A long wash of flame and the song of

rocket-tubes seared across the cold black sky.

* * * * *

Within the silver and ebony room that had seen the pronouncement of Knute Savary's doom, oxygen tanks purred softly from their niches in the walls. Lewis Hart lifted a haggard face from the pages softly dropping out of an electric transcriber at his elbow.

"The last Alpine Outpost has fallen," he said. "You can mark another all-black area on the map, Lu-Fein. Alaska reports dense blackness over the Bering Straits. Norway has been silent since noon. In the Amazon valley—the air is thicker there—we seem to be holding our own. They dread our atmospheric-vibrators."

The old Chinese leader laid one shaking hand on a heavy pile of papers in front of him. "You think this message is authentic, Hart?"

The American President nodded. "Yes. It is unbelievable but it is Knute Savary's writing and style. We know that the *Victory* was built to withstand all the known hazards of space. Is it impossible after all for him to have reached us? Knowing the man, I do not think so."

The Arab scientist who ruled the vast African state laid one lean brown hand on a glowing slab of Speiran opal-stone set before him. "This stone, at least, was mined on no earthly or lunar soil," he said decisively.

The European leader at his side brought one fist fiercely down on the table and cried out, "Then we must believe that Knute Savary has been within our reach. That the one man who could help us has touched our world—and is gone!"

The old Celestial touched the message before him with a shaking hand. "We have no time for vain repinings," he said slowly. "One question only remains. Has this come in time to save Earth?"

The dark old Arab lifted heavy and fatalistic shoulders. "I fear not. Even if we could halt this loss of air under which our people die it would solve only half our problems. With the surface of our world almost closed to us the construction of machines such as are described in brief in Savary's first outline may prove beyond our power. When Knute Savary wrote this he thought we had generations before us instead of—*days.*"

Even as Speira had perished half a million years ago, Earth was dying. Above her thinning air, a gibbous fragment of moon hung like a tattered corpse and, like some hideous shadow of its shattered sphere, a new black globe floated by day over mankind's head and swung athwart the moon's broken shield by night.

It was three years now since a spatial catastrophe such as even Savary had never dreamed of set that sign of dissolution in Earth's thinning and darkening sky. Hurtling on some uncharted and erratic path, a dark and moon-sized wanderer from space had flung itself athwart the orbit of the Earth and crashed into the moon.

For weeks, the skies had flamed with the stupendous spectacle of disrupting spheres while Earth had cowered under the terrible repercussions of that unbelievable cosmic crash. Earthquakes and tidal waves, hurricanes and atmospheric convulsions had devastated the world. Then comparative calm had returned.

The two stellar spheres—or what remained of them—had swung into twin orbits around the shaken Earth. But spurred on by the magnetic storms of that interlunar collision, the doom of airlessness had fastened on man's home—its advance no more one of lifetimes but of months. And from the new black satellite, swaying in Man's invaded heavens, had poured a loathsome, space-travelling foe.

SAVARY'S gift and warning had come—supreme irony—three years too late. Humanity was fighting still but half the population of the world was dead. Her sciences and knowledge were proving vain though Man had not faltered. Individual life had become a small thing now that the future of their race itself was at stake.

After a moment Lu Fein touched a bell at his side. "Send the air-guard who brought this last message in," he ordered an attendant.

A young man in the ragged remnants of the air-force service came in and saluted stiffly. In a drawn and hard-set face dauntless eyes burned coldly.

Lu Fein spoke. "You are Lieutenant Gordon?"

"Carl Gordon, Lieutenant, Stratosphere-station four hundred seventy-eight, Upper Tibet," the air-guard said briefly. "I was alone at the station, sir. My companion had been killed two days previously. I was taking my one-hour sleep-allowance in the oxygen room when a crash on the landing field outside woke me. I went out without taking time to put on a helmet. The Black Moon was obscuring the sky, but there was enough light from the ship's open hatchway for me to see a little.

"It filled the whole landing-field—a great faceted cylinder, somewhat like our Martian space-ships in line but much vaster and of a metal I have never seen before—a green metal with a frosty sheen. The woman who gave me the package was young—auburn hair and more than usually beautiful.

"She told me to give this to the World Council, then she added one thing more —just two words, to be remembered if the Earth's need was ever great! 'The Asteroids.' That was all. She shut the door—or rather it seemed to glide shut of itself. The vessel rose from the ground as though propelled by some invisible beam. Then it switched on its rockets and was gone."

Lewis Hart looked at him keenly. "You are wounded?" he asked. One of the guard's arms was in a sling. The young man nodded briefly.

"Yes. The Caucasus is full of them. There are so few of us now that they have started leaking over the passes into Tibet. I had to come single-handed as soon as I could be replaced. The Pacific reports were bad, so I took the European route but I ran into them in the upper Caucasus. The whole range was black with them."

"How did you get out?"

"My vibrators worked. They can't stand them. It doesn't kill them but it seems to get their nerve, like water on cats. They smashed in one of the front windows and one of their feelers touched my arm—just a touch, but it felt like an iron girder crashing down on me.

"The doctors say I'll be able to use it again in a few weeks, that I can still be counted on the fighting list. It's a good thing, for there aren't many of us left in our district."

"Or anywhere else," Hart commented wearily. "The Guards are bearing the brunt of the fight everywhere. How is the air in upper Tibet?"

The young Guard looked grim. "Half an hour without oxygen helmets is all we can stand—even with the new progressive training. It's bad, sir."

Lu Fein sighed. "You may sit down, Lieutenant Gordon. I think you have earned the right to know that the message you risked your life to bring us may yet help us save the world. Show him Savary's letter, Hart."

While the dazed air-guard read the terse message of Knute Savary's note to the World-Council, the European president exclaimed once more in a passionate undertone, "If only we knew how to reach him! It is the bitterest irony—to have had the one man who might save Earth within our grasp and to learn of it too late!"

Carl Gordon looked up sharply. "But would it have been of any avail to have known, sir?" he asked. "Would Knute Savary have stayed to help the world that exiled him into space?"

Hart said gravely, "He is a man hard for us to judge, one who proved himself as great in evil as in good. But—I think he would have stayed. Did he not cross space to warn us of Earth's approaching doom? He might enslave our planet if he did return but he would come—if it were possible to reach him. That is a vain enough dream."

Rank had leveled greatly during mankind's common fight against destruction. Carl Gordon forgot about it. Nor did they remind him.

"Not completely vain," he said. "After all, it is many years now since we have sent space-ships voyaging to Mars. Savary himself has proven that those airless abysses can be conquered. Give me leave to try to find them!"

Lu Fein looked at him sadly. "Youth speaks," he said. "How will you find one man in all the immensities of space?"

The air-guard smiled. His head lifted proudly. "My father was one of Knute Savary's most trusted engineers. He was pardoned—with the others who fought with him against the world—after the latter was exiled from Earth.

"He helped build and design the ship in which Savary was hurled into the void. He knows where the plans of it were secreted. When it was finished only the designs of the still-incomplete parts were found. Build me such a ship—put every man you can spare at the job—and I will know toward what corner of space to turn its bow."

Lewis Hart leaned forward. "Toward the Asteroids?" he asked.

"Yes. I had taken out my pilot's papers for the Martian air-route just before the Black Moon came. Give me my father as engineer—Savary's men were good men, sirs—and I think I could take a spaceship built on the lines of the *Victory* out to the Asteroids, where I believe Savary has established himself. Once there we must depend on chance—but can we afford to let one chance slip when Earth is perishing?"

The fire of his words woke a new energy in the wearied and aged veins of his listeners. So much impossible had happened to the bludgeoned Earth that nothing now seemed wholly so. The old Celestial spoke slowly.

"It is a faint chance indeed—and one worth nothing unless we can manage to build these revitalizers of which Savary speaks. Otherwise, before you could reach those distant planetoids and return, Earth will be no more than an airless tomb for Man. If the construction of these machines proves possible—"

Lewis Hart banged a sudden fist down on the silver table. "It must be *made* possible!" he exclaimed sternly. "We cannot afford to fail when Earth is dying! Nor can we afford to neglect a chance, however improbable.

"Show us the plans of Knute Savary's ship and your pilot's papers, Gordon, and even though the women and children toil with the rest we will build you a vessel in which to cross space!"

* * * * *

Across the endless night of space, a speck of light took shape and moved. Across the icy panorama of the changeless, remote stars, the infinite proscenium of cosmic darkness, the sharp jet of rocket-flames seared sharply. Within the green hull of the *Victory*, returning to Speira laden with fruit and seed from Reinos, Nadja Savary paused as she bent over the vision-plate and stared closer at a moving pinprick of light.

Across a mighty gap of space Carl Gordon lifted a taut hollow-eyed face toward the grey-haired man at his side. Lewis Hart turned at his call. "The Asteroids are ahead of us," Gordon said. "My calculations were exact. Do you see those ten luminous dots? In four hours we shall be on their fringe."

Space had cradled them for weeks. Its pressure of endless sunlit night, of time that lapped them in a pulseless tideless sea, had forged them anew. Their spirits knew but one thought—the ever-present goad of Earth's urgent need.

SUDDENLY Carl Gordon started, bent closer to the vision-plate and stared. Across their bow a pinpoint of light moved in the starlit depths beyond. Catching Hart's arm, he pointed. Even while the latter turned the air-guard leaped to the observatory—built in imitation of the *Victory's* but equipped with only one small telescope. He swung the telescope out toward that tiny dot of motion flashing across the unsentient void.

A minute later a frantic call was crossing the aeon-old silence of cosmic night. Knute Savary, bending over the vision-plate beside Nadja, heard the low hum of the waking radiophone and switched it on. The staccato summons

beat desperately into the quiet room.

"Is that the *Victory?* Is that the *Victory?* Lewis Hart calling you, Savary! Lewis Hart calling you, Savary! Can you hear?"

Silence—then the incisiveness of a cold clear voice, winging through the void. "Knute Savary speaking. Brake with your bow-rockets. We will pick you up as you draw closer."

Nadja looked at the vision-plate. "They are braking. I can see their bow-rockets. They should be close to us within fifteen minutes."

Savary said, "Pick them up with the Lyddan beam. I am braking faster than they can."

The radiophone hummed again, filled with Lewis Hart's voice, unrecognizably tense. "We are braking as fast as we can. We must reach you, Savary. The Earth is dying. You are our only hope!"

Savary swung on Nadja with a piercing glance. "How did they know where to find us?"

The girl paled a little but looked back steadily. "I told them. I told the Airguard to remember two words against Earth's need—'The Asteroids.' That was all."

Savary smiled a little. "Their need must have been great—and it must have been on them even then. It is only two months and a half by earthly calender since we returned from that flight."

"Are you sorry I told them?" Nadja asked anxiously.

Knute Savary shook his head. "If Earth needs me I am glad to go. They must have found the plans of the *Victory*. It is her twin that is drawing near to us now. Get into a space-suit and be ready to grapple their ship to ours."

His fingers brushed the control-board as he spoke. No more than a mile to one side the smaller but otherwise identical earth-ship mirrored the cold gleam of the stars in her faceted stelumin hull.

A slight shock ran through the *Victory's* hull. The invisible molecular beam of the Lyddans had reached out across the bottomless gap and fastened on the other ship. Locked invisibly together the two vessels sped with still-flaming prows toward the hurtling stream of the Asteroids.

Savary leaned over the radiophone. "Turn off your rockets," he said. "We are grappling you with a new beam. There are only two of us on board, so have your crew ready to hook the ships together."

Slowly, the two ships closed in as Savary shortened the force-beam that held them attached. Half an hour later Lewis Hart swung himself carefully across the gap that divided the grappled ships and followed Nadja's space-suited figure through the various airlocks.

He stepped out of his own space-suit to find Knute Savary considering him sardonically. For a moment both men looked at each other silently. Then Savary smiled and held out his hand.

"It's all right, Hart. You were right when you exiled me. Tell me what danger menaces Earth."

CHAPTER XVI

Cataclysm

IN brief grim words Hart told them of the cataclysm that had shattered the dead world of the moon and set a somber alien satelite revolving in their terrestrial skies. He told them of the foul legions of invaders who were overwhelming the stricken globe.

"At first," he said, "they came in small drifts that settled in dense blackness on the crests of our highest snow-peaks. Wherever they lighted they spread a nightmare of darkness that crept valleyward and slew. The mountain villages and towns were the first to feel their deadly power.

"Since then they have overrun the Earth. Stelumin walls crumble beneath their tentacled weight. They float through the air like vapor and at times seem no more solid than summer mists. Yet at a touch the hull of our strongest stratosphere-ship becomes mere twisted fragments of metal and their massive

weight can flatten a city."

Savary's brows met in a thoughtful frown. "What do they look like?"

Hart lifted despairing shoulders. "Like nothing ever imagined on Earth. A few have been seen separated from the rest by airguards. Gordon, our pilot—the man who is responsible for our being here—says that they are like tiny summer clouds, formless and soft of outline but of a nightmare black. The only weapons that seem to affect them are your atmospheric-vibrators.

"At night this alone allows us to circulate when needed on the surface. They seem to grow sluggish and settle like swarming bees in the higher levels. Humanity—or what is left of it—has fled for refuge to the old mines and prisons. There the air is thicker and we can bar the way against the Moon-Things with vibrators and granite walls.

"Only fighters remain on the Earth's surface, save at places like the World-Buildings, where great barrages of vibrators hold them off—for the moment. Our scientists have striven in vain to find weapons that would destroy these creatures—even more vainly to find means of arresting Earth's terrible loss of air. You are now our only hope."

Savary questioned Nadja with his eyes. She turned from a survey of the vast stellar chart above the control-panel, said, "We must land at Speira first but we are only two hours off. They are waiting for the seeds and wild-fowl we are bringing them from Reinos. I think too that Ydraas, the Speiran whose mate died at her reanimation, would be happy to come with us."

Savary turned toward Hart. His eyes flashed. "Start back toward Earth. We will overtake you. Habit has inured us to acceleration beyond your power to endure. In three weeks we will be near Earth."

Four hours later the Earth-bound ship saw the hot flare of the *Victory's* rockets plow their bright furrow across space. Swiftly the seasoned ship of space overhauled them till a pinpoint of flame was all that remained of her in the black gulf ahead.

Within the control-room the Speiran, Ydraas, and a wrinkled Older One from Lydda—a cousin of Telzon, who had asked to accompany them on their flight to Earth's rescue—divided the watches of the stellar night with Nadja. Savary spent most of his time within the laboratory.

The other space-ship had been left far behind. The tentacled sun grew daily in diameter as it flamed across their bow and their flight was measured by the growing spread of its fiery might. Sometimes the monotony was broken by meteors that rose in pulseless swarms to pour across their path and pelt their broken fragments vainly against the smooth impregnability of their hull.

At last, however, Mars rose on their left. Four days later Earth hung like a small round disc of light in the airless black ahead. Nadja called Savary from his laboratory when the broken fragments of the moon lifted from the sky before their path. The braking rockets were purring now against their bow and, off in the illimitable night behind them, the pinprick of flame that was their companion ship had swept into the telescope's range.

Nadja deflected the course of the space-ship so as to pass close to the ruin of Earth's once-fair satellite. A cosmic spectacle of destruction met their eyes. Nearly half the tiny world had been annihilated by that inconceivable collision in space. Like some scarred cadaver of the void, the torn remains wheeled by them as they sped.

Beyond—halfway between the moon and Earth—the ominous darkness of the alien world interposed her shield between the silver fragment still reeling through the indifferent night and its parent orb. Nadja deflected the bow of the *Victory* to avoid passing too close. Not till they had learned more about this sinister invader of their solar system did they wish to challenge it directly.

SWIFTLY the jagged derelict of Earth's tributary fell away behind them while the planet of their birth

swayed like some bright jewel in the void ahead. Cloudless yet airwrapped still, it glowed like an opal. Fearfully, Nadja swung the telescope down toward the remote surface and drew back aghast from the spectacle of desolation spread beneath them.

They had approached Earth on her nightward side on their last flying trip. Now it was revealed to them in the pitiless light of a barely tempered sun. They were sinking slowly through the tenuous air—air that was darkling blue like Speira's first atmosphere—and the panorama of half their world was clear to their eyes.

Where white snows had gleamed cleanly on sky-reaching mountain tops black shadows lay and spread toward the lower levels like the festering sores of some foul illness. Elsewhere forests lay withered, their leafage sear and dried. Plains stretched their desiccated levels in brown endless desert miles. Empty river-beds traced sun-baked ravines between deserted shores.

The sparkle of the Northern Pacific drew their eyes. There was water still on the parching Earth—water that still could sparkle and laugh in a dying world. Savary sank the space-ship toward it and spoke between clenched teeth.

"Every mountain range is blotted out. Their black pock-marks cover half Asia and much of South America. Alaska and the Scandinavian nations have vanished. All Europe's central mountain system is submerged."

Nadja swept a somber gaze over the approaching plains of western North America. "The walls of the World-Building are still intact," she said. "Look, Knute. See that spear of crackling blue light rising through the thin air. It's a neutron-beam! They have managed to build one revitalizing machine at least!"

Savary looked down at the pale gleam rising upward to tap the sun. "We must make them turn it off before we can land," he said. His voice rang through the radiophone, echoing around the world that had exiled him six years before. In the Council Room, where hollow-eyed men still battled for the life of Earth, the radio-receivers filled with that unexpected call.

"Knute Savary speaking! Knute Savary speaking. I am landing before the World-Building. Turn your solar-machine off."

Like a message of hope, the great green cylinder floated above the embattled walls of the World Government edifices. Orders flashed forth from the council and men in oxygen-helmets ran out to switch off the neutron-beam. Slowly the *Victory* sank down through the deep blue air. Slowly she came to rest upon the soil that had sent her forth to an eternal exile.

In the silver and ebony room in which he had once stood before his judges, Knute Savary faced the worn guardians of the world. After a silence weightier by far than words Lu Fein spoke with dignity.

"It seems a miracle that Carl Gordon should have found you. We had hoped little of his flight in search of you. Knute Savary, we who cast you forth to spatial exile now call on you to save Earth in her final extremity.

"Our planet is perishing. Only a handful of humanity remains. Tomorrow, if nothing intervenes, Earth will be even as the moon. We have turned to you in our final despair—having already accepted gratefully the gift of possible air from your hands. Is there anything you can do to save us?"

ALL eyes were fixed on the still figure before them. His glance swept the great maps that frescoed the walls on either side, grew sober as he saw how little of the world there was left to save.

"I have come to try," he said quietly. "The *Victory* has acquired new and mighty weapons in her rangings of the Asteroids and I have added others before which even your strange invaders may quail. Lewis Hart and Gordon are close behind me. A strange chance allowed our ships' paths to cross each other in remote space. Tell me what you know of these things with which you battle."

The Chinese president lifted hopeless

shoulders. "Nothing, save that they are blacker than pitch and of a substance and law unknown to our world. They pour in constantly increasing streams across the void between their world and ours and overwhelm all but our mightiest defences.

"In our deepest underground mines and prisons the women and children are still safe. On the surface only one or two government quarters like this—manned by picked air-guards—dispute with them the complete possession of our world."

Savary turned his deep gaze on the swarthy Arabian scientist; the most erudite of the seven world presidents. "Hassan, what do you think of them?"

The Arabian president lifted keen black eyes. "I think that they represent matter capable of condensing itself or vaporizing itself at will. As to their weight—we know that there are in space bodies smaller than our Earth, yet possessing densities greater than our sun. These things parallel this composition, so great is the disproportion between their terrible weight when condensed and their size.

"At their vaporized largest they seem no bigger than small clouds. Yet the density of one alone can break a man's bones like twigs at a touch. All that we know of them is that they absorb light rays and create a complete darkness wherever they are. Their presence apparently exudes radiations harmful to man, for people have died simply from their approach.

"When they first settled on the higher Alpine peaks, their black canopies seemed to be the center of strange and violent magnetic storms that appeared to coincide in some fashion with the increase in the speed with which our atmosphere seemed to be leaking away from us. This would explain the vast stimulation that has occurred in our loss of air since they came."

"Thank you, Hassan: Your ideas are helpful. I think I know a weapon these things will fear. But there are substances of which I will give you the formulae—substances I must have. How many men can you put on the job?"

Lu-Fein lifted his old head proudly. "Every man, woman and child left in our underground refuges. All humanity is fighting for the survival of its world. We built Gordon's space-ship in two weeks and the solar-machines in six.

"As long as there is still water left on Earth, we possess the means of obtaining oxygen at need. The old and infirm will do with less air—even though they die from it—that the others may work strongly for humanity's salvation. Tell us what you want and if human hands and human minds can achieve it, it shall be done."

Savary inclined his head. "Hassan, get the best scientists left alive and the foremost chemists—also every engineering expert you possess. Hart tells me that Carl Gordon's father was once one of my men. I remember him as a good one. Put him in charge of the engineering work. I want three weeks' work done in as many days, if possible.

"To assist you, I shall give you a member of my crew. He is a Lyddan scientist. His world is one of the many tiny planets whirling in the Asteroid belt. He will teach your workers the use of the Lyddan force-beam belt, with which one man can do the work of ten. He belongs to a civilization as far ahead of ours as ours is ahead of Neolithic Man."

He paused and surveyed the Council. "I think that we shall conquer. In space I—and Nadja Manners, the woman who betrayed my fortress to you long ago only to hide on board the *Victory* that I might not go alone into the unknown space—Nadja Manners and I encountered and defeated beings as unnatural as these. As soon as my ship is equipped with the weapons I need I shall make a trial attack on them where they are thickest. Can you tell me where that is?"

The South American president leaped to his feet, his dark, Castilian face blazing with a fire that belied his age. He pointed to the maps etched on the walls.

"No continent has suffered as much as South America. Outside the Amazon valley, no human being lives where millions teemed before. They have crushed the towns of the west coast out of ex-

istence, covered the Andes from Central America to the Cape. Attack them in their Andean fastnesses, Knute Savary —and take me with you to see them die!"

"Come, if you wish. It is unimportant to say that we may perish. If we do—remember, Lu-Fein, that there are other worlds in space. Humanity need not die with its planetary home. Amid the Asteroids there are new young worlds where Man's seed may prosper."

CHAPTER XVII

A Trip to the Black Moon

NADJA SAVARY swung the vision-plate down toward the wide Pacific and said, "It is growing darker."

A vague twilight seemed to hang over the sea. The pale stars that pricked the dark blue of the sky even in full daylight had disappeared behind an impalpable vein. Carl Gordon left his seat before one of the new weapons and bent over the vision-plate beside him.

"That is always the first sign of the things," he said. "Long before one reaches the place where they hover the air grows slowly darker as though they fed on the surrounding light, draining it away."

Ramoneda moved restlessly. "What if the hull does not hold up?" he asked. "Even stelumin is not strong enough to withstand the infernal weight of these creatures when they condense."

The Speiran in charge of another of the hurriedly added weapons turned and spoke from his seat. "But this ship is not walled with stelumin. Speiran vulcan fashions its hull and not even the weight of these Moon-Things can bend *that*."

The space-ship rose higher. Zonlor, the wizened Lyddan, who sat with calm interest at Ydraas' side, sent his thoughts across to the girl at the controls.

"There is a kind of mental miasma thickening around us," he told her. "These beings must possess little mind. There are no thought waves perceptible in the pressure I feel growing around us —only vibrations of hate and lust and hunger that must be their mass mentality impinging upon ours."

Nadja nodded. She too had felt the growing unrest in the psychic tides around them. She looked at Savary, who had just filled a test tube from the murky air without. A new sternness sat upon his face. Three days of watching Mankind living like cowed rabbits within the warrens where they had fled had set a look of icy grimness over the still power of his face.

If they failed, Earth must die, must become, as Speira had been, a frozen corpse spinning for airless eternities through unsentient space. For, unless the Black Things were conquered of what use would the neutron-rays be?

Nadja shook herself sharply. Such thoughts were poor preparation for battle. "Look, Ramoneda," she said, looking downward into the tilted vision-plate, "it is getting dark below now. How far do you think we are from the things?"

The Chilean president's face set grimly. "A few minutes more and we should touch their outer fringes. The Peruvian coastline—only there is no more a Peru—is only some fifty miles distant. What we see is only the shadow they cast."

Savary came in from his laboratory. The cold power of his glance swept around the room.

"There are traces of alien substances in the air-sample I have taken," he said quietly, "substances which respond to no analysis or test of Earth but whose emanations are clearly hostile to organic life as we know it to our planet. Perhaps, later, I may be able to discover some chemical element that will prove noxious to these creatures' systems, but for the moment, we have other things to do."

He took Nadja's place and looked into the vision-plate. Below was dense and murky night. The long billows of the Pacific were no more than shadows of motion in the Stygian depths above which they sped. Blackness, intense and terri-

ble, was wrapping them in its unnatural embrace.

Gordon barked a warning.

"Look out! We are among them."

They were plunging into an inferno of abysmal night. Around them swirled soft puffs of vapor, multitudes of things no larger than the light clouds of a summer's day, but of a black so deadly that they hit the human eye like a blow. Beyond them opened vistas of unfathomed night . . . pitch-black perspectives that extended before them like the gates to some indescribable hell.

"They are only just waking to our presence," Nadja said quietly. "Strange and unnamable emotions are pressing in on us."

Ydraas the Speiran looked across at Savary curiously. "They create a darkness that beggers that of space," he said. "Are they other-dimensional foes?"

Savary uttered a swift negation. "No. They are of our planet—otherwise their weight would not affect us. They are clinging to us now. The speed of the ship is slowing perceptibly."

Soft shudders were running through the slowing ship. Along the outer shell, strange feelers were brushing and tightening, clinging and growing each moment heavier. Ramoneda and Carl Gordon's faces whitened and their lips set. They alone knew by experience what an encounter with these invaders of Earth could be like.

Nadja looked at the speed indicator. "We have ceased to move," she said.

BELOW and around them pressed living night—a night whose mile-deep thickness swirled in invisible coils around the ship. Savary switched off the useless rockets and a strange silence fell on the varied group within the control room. Within the large square of the vision-plate the complete annihilation of all light acted like a material oppression.

Eyes turned on Knute Savary, who sat impassively before the wide control-panel. He answered their silent question. "We will use the new weapons in a moment. First I want to make sure of the strength of our hull. Let them try their full weight against us."

The stillness grew more and more unbearable. They sensed immense weight slowly condensing and closing upon the motionless ship. Carl Gordon relieved the tension by speaking quietly to Nadja. "This is the feeling the things always spread," he said, "a sort of lethargy and strange horror."

Savary turned. "The feeling you mention is self-created," he told them. "These creatures have no hypnotic powers. The human eye is one of the chief gateways to the mind and the total absence of all light which these creatures create or embody represents a sort of sensory vacuum—a violent negation of the optic nerve's purpose, so unnatural as to react on the brain."

He stopped as the control room shivered under the tentacled weight fastened around them. The vision-plate showed no more swirlings of moving vapor, nothing but a solid wall of impenetrable black.

"It is like being imprisoned in the heart of some immense atom," Nadja said in a low voice.

Savary nodded. "The walls seem to be holding. They cannot break vulcan. Now that we know that we can fight!"

On the control-board of the *Victory* Savary touched the directing dials of two of the four new weapons, aiming them at right angles to the ship by a twirl of their dials. A strange resonant purr seemed to pour itself backward from the outer airlocks, where the weapons themselves were installed. Nadja looked frightened but Savary smiled.

"That is only the machinery itself getting under way," he said. "The insulation preserves us from the vibrations we are sending out against them."

Around them the black densities were shuddering and their shudders ran through the ship. The throb of strange engines grew louder and louder but not as loud, Nadja knew, as the crescendo of terrible sound-vibrations that were pouring out against the locked solidity of the foe. All eyes were glued on the lifted vision-plate.

The wall of impenetrable black flung

across the vision-plate began to give an impression of spreading, still more of a feeling than anything perceptible to the eye. Suddenly Nadja uttered an exclamation of triumph. A thin streak of somber gray appeared on the inky field!

Savary smiled thinly. "It works!" he said. His eyes flashed a message to Ydraas and Gordon. Their vibrators hurled two additional streams of deadly vibrations into the vaporizing foe. Ramoneda swung on Zonlor.

"But what is happening?" he queried.

The Lyddan answered him in measured thoughts. "The sound-vibrators are disrupting their molecular composition. If Savary had not found a substance whose composition I do not yet know, capable of interposing an absolute shield between us and the vibrations we are hurling forth, our own molecules would likewise be dissolving under the power of sound stepped up to unimaginable rhythms."

The old Chilean looked at the vision-plate with eager eyes. It showed faint washes of light—not so much light itself as a faint memory of its lost and distant ghost.

A sense of other-species panic, of untranslatable suffering and disarray, began to beat in against the more finely attuned psychic nerves of Nadja and the old birdman. The voiceless cry of matter, vibrating to a rhythm of dissolution which they could not understand, ached through their minds.

Around them, the depths of that infinite blackness dilated into no less Stygian but less oppressive clouds and whorls of swirling vaporized jet. The moon-things had ceased to condense their savage weight around the space-ship. Instead, they were expanding in terror, thinning out in vast billows, many miles in depth, through which the destroying sound-rhythms played with a less immediate power.

Nadja flung on the rocket-power experimentally and the released ship began to fight its way upward out of the tides of the dissolving things that held them.

Up and up they rose toward some infinitely remote surface, while around them eddied a continual sense of vaporous motion which the eye felt rather than saw. Light began to sift down through the darkness thinning around them. They floated again in a murky twilight where all luminosity, even the hot flare of their rockets, seemed to drown and drain away like water on desert sands. A visibility of sorts called on their protesting eyes to resume their functions.

CARL GORDON exclaimed triumphantly. Even from this elevation the sound-vibrators were hurtling Earth's first successful challenge at her foes. Beneath them inky depths were breaking and dissolving and distant washes of gray gave outline to the milling legions of the invaders.

A peak of the Andes stabbed upward through the violent sea of jet, only to crumble—mute witness to the power of sound made lethal—at a chance touch of Ydraas' vibrator. Savary sank the space-ship lower and the sky dimmed to a renewed vault of swimming night.

Beneath them mill-deep ranks of fused and fleeing foes formed depths where light died and darkness dug pits of appalling blackness into which the human mind seemed to plunge and sink and lose itself. Zonlor spoke in a shaken mental whisper.

"They have never known fear before—all their mental vibrations are shaken by this new sense of terror and danger."

Savary bent keen eyes over the vision-plate. Experimentally, he reached for a switch and the brilliant searchlights of the space-ship flashed outward like golden spears. An exclamation sprang from the Chilean president's lips. As the mighty spears of gold leaped forth toward the black vapors around them, they vanished like mists in the sun. Savary uttered a short, satisfied exclamation.

He switched them off and said, "I'm going to try the disintegrators on them. Against their more impenetrable state of a little while ago they would have been useless. Now that they are vaporized, however, it may destroy them. The

vibrators are growing too slow as these things expand."

Carl Gordon looked at the great vision-plate. He saw the broad fans of the disintegrators sweep out like sheafs of loosened arrows of light against the whorls of vaporized jet—sweep and annihilate! Like the strokes of some giant broom, they dissolved the thin vapors of the billowing foe—now cutting swaths thousands of feet deep through the league-long ranks that hid the day, now leaping back in showers of blinding sparks from the density of some still unvaporized clot.

His pulses were racing triumphantly. His teeth clicked savagely. Ydraas heard him mutter elatedly, "Take that, you hell-brood! I hope some of you were the things that killed Harry and Joe and good old Pete!"

The Speiran looked across at him with a flash of sympathy. "Though a thousand of your race die daily, still it is the death of your nearest comrades that bites deepest," he said. "These men were your friends?"

Gordon nodded. "Air-guards. Eight hundred thousand Guards have been killed since the Black Moon came—four times our complete roll-call. But millions have died amid the civilian populations before the remnants took refuge underground."

The Speiran nodded slowly. "It is bitter—in one's springtime of life—to watch the dying struggles of one's world. I, too, have seen the blight of cosmic death beat down upon the planet of my youth.

"But you are lucky—you will see it lift and withdraw. Knute Savary will save Earth. If he fails—and such a being does not fail—you will at least be free to die with your world, not wake to the loneliness of another remote day that must be ever haunted by the bitter memories of a distant, unreclaimable past."

The young air-guard turned a friendly glance towards the grave Speiran. He extended a hand. "Tomorrow we may all be dead," he said. "But if we live—and conquer—you need not lack one friend of today who will seek to lessen the weight of your loneliness.

"Since your mate has died and you are not needed on Speira, you can adventure through space with me or stay on Earth awhile. Perhaps you can find a mate among our Terrestrial girls and bring her back to you own world."

Ydraas pressed his hand. "I accept your friendship. We two could find interesting adventures among the worlds of our system—but only if Speira has no need of me."

They looked once more at the vision-plate. The night swirling against it was riddled now with long slashes of leaden grey, while here and there the showering brightness of the back-flung rays played like a spray of flame. Savary swung the *Victory* in a wide curve. His calculations indicated that they were near the end of the Andean chain and he hurled her back along her death-dealing path.

"I wonder what the system they come from is like? For the moment we are defeating them but even if we destroy all those now infesting Earth we shall have gained little unless we stop their influx at its source. The only way to free our planet of them is to follow them to their own world and destroy their entire brood."

Ydraas broke the moment's silence. He flung back the bronze hair curling over the grave perfection of his forehead and his eyes flashed.

"Truly, you have called me back to a life well worth living—however brief it may be," he said. "When shall we leave for this alien satellite?"

Savary looked at him gravely. "I have no right to ask you or Zonlor to accompany me on such a venture. If you wish to leave Earth, the space-ship which Carl Gordon piloted in search of us can return you safely to your own worlds. A venture such as lies ahead of us is too desperate for any but Terrestrials to undertake. We go to save our world—but yours await you, unthreatened in space."

ZONLOR answered for both ultra-Terrestrials. His thoughts reached out calmly. "Speira owes you life itself

and Lydda the hope of a renewed existence. Your world is our world. If we die for it it is well. Death in any case is nothing and there should be knowledge to glean on a world that could spawn such creatures as these."

Neither the Chilean nor Carl Gordon said anything. Like Savary and the slim girl who fought at his side, they were Earth-people. Whatever death they went to mattered not as long as it would save their perishing race.

Savary said quietly, "Earth will not forget." After a moment's silence he added, "When we have worked as much destruction as we can here we will return to the World-Buildings to give them the news that a weapon has been found that will defeat these Things and to prepare for the attempt we must make. We must have stronger weapons.

"When we destroyed the Nerea, we had one weapon that was invincible against them. Against these things we have nothing destructive. Moreover we need to be doubly strong, for within their blanketing hold we lose all means of replenishing our solar power. We cannot afford to fail."

Without, the great disintegrators still swept their vast arc through the dissolving tides of black. It was clear enough now for them to see a great mass of condensed darkness meet the waves of a sound-vibrator that Savary flung against it and crumble slowly.

They looked down and saw the stripped Andean summits breaking through the dissolving black that had blanketed them for so long, peak after peak upthrusting through that seemingly limitless sea of molten jet. Above them, a vast canopy of sickening night was mounting and spreading, wavering away into the dimly perceived sky.

But the hordes they battled were drawing countless millions to them as they died. From Panama to the Cape the teeming tides of the things were flowing and converging toward the seat of the turmoil they dealt.

Once more they sank into the heart of the battle. For endless hours they hurled the alternating forces of the disintegrators and the sound-vibrators at the sable tides that milled around them. Gordon and the old Castilian felt their minds reel and wander through nightmare mazes as the other-world turmoil eddied around them.

Suddenly the girl cried out sharply. She had turned her eyes once more to the vision-plate after a moment's rest from its swirling chaos of Stygian death. Now, leaning forward abruptly, she laid her hand on Savary's arm.

"Knute! *Look!* They are thickening around us! It is they who are attacking now! Look what they are doing!"

In an immense and whirling funnel the things were leaving Earth. Like bones bared by a withdrawing horde of vultures—bones gnawed clean and bare by these vapor-horrors of the void—the arid crests of the Andes slipped one by one out of the Lethean night that had ruled them.

Far below the blue Pacific slowly crawled from the murk that had drowned its light. In a mile-thick column —a whorl of profound night—the creatures that had ruled the Andes were flowing up and up into the darkening sky. At their heart—cupped in a vast funnel made by their swirling departure —the *Victory* was being lifted farther and farther from the released Earth.

Savary's hand clamped down on the rocket-tubes and the white-hot blaze shot out across that Stygian scene. After a moment's intolerable trembling the space-ship leaped blindly ahead, slowed like a car plowing through thickening mud, then shuddered to a quivering stop as the things in renewed numbers condensed around her.

The Speiran uttered a shout of horror as his eyes lifted to the vision-plate. Around them spread a weird sea of pale flame as the disintegrator-rays were flung back on themselves in one immense, converging tide by the closing circle of the condensing foe. Savary's hand leaped out to the controlling switches, tripping them at lightning speed.

Gordon and Ramoneda released their caught breath but Nadja smiled. "You

forgot that our hull is of vulcan and proof against even the disintegrators, Ydraas," she remarked.

Carl Gordon answered before the Speiran. "But we do not know if the case is similar for the insulation. If it were stripped from our hull we would be powerless to use the sound-vibrator."

Savary nodded his assent. His eyes were fixed on the utter blackness now muffling the vision-plate.

"Turn on the vibrators," he ordered. "We are being carried higher and higher without volition of our own. With the foe as dense as this the rockets are useless. Outside of this ring of immense weight which they have flung around us their millions are probably whirling upward in vapor form, carrying those who hold us with them."

ONCE more every vibrator flung its intolerable rhythm at the tightened molecular prison that held them fast. But now a concerted plan of action seemed to impel the things with a sacrificial discipline.

As fast as the faint grey washes that indicated a disruption of the vise-like walls appeared within the vision-plate, other tides of condensing creatures flung themselves into the breaches. Savary flung on the rockets once more but only a vast shudder running through the mighty ship answered their burst of flame.

"Why aren't the sound-vibrators working as they did before?" Ramoneda exclaimed, appalled at this sudden turn from victory to apparent helplessness.

Savary didn't look up from his tense attitude over the control-board but the old Lyydan, Zonlor, turned to the Terrestrial and thought calmly, "The vibrators are killing them—but too slowly for our need. That is their weakness—a weakness Savary foresaw, but which the creatures without have only just discovered. They can replace the walls we shatter as quickly as we break them down. Some things of higher mentality are directing their course now."

"But where are they bringing us?"

Savary switched off the rocket-tubes abruptly and rose. He answered for the Lyddan. "Probably to their moon. The flight we intended to take to their own world is being imposed on us before we are ready for it. However, I have hopes that most of their kindred on Earth have joined them in their exodus."

"What can we do?" Ydraas asked.

Savary looked at the speed-indicator and shrugged. "Nothing for the moment. We are already beyond the limits of our stratosphere. In any case we have certain margin of time ahead of us. At this rate of speed we shall take close to a week to reach their planetoid. Meanwhile, our sound-vibrators will be destroying them by the thousands. We had better use only two at a time. When we reach their moon, we shall need all our weapons.

"Nadja, I am going to hand command of the ship back to you. Call me if anything untoward develops. Otherwise, I do not want to be disturbed till we reach our goal. I am taking some food-tablets into the laboratory with me, so that you need not worry yourself about me. Before we reach these creatures' world, we must find ourselves other and stronger fangs."

Nadja turned from the vision-plate and said, "Wait. Look below, Knute."

Below them, a rift had occurred as some momentarily thin wall of the moon-creatures melted for a moment under the rhythms of the vibrators. Far, far below—distance dimming its hues and diminishing even its lordliest peaks—the Earth was sinking into the embraces of space.

For a brief moment they viewed her hemispheres spread before them as it rotated in the unsentient void, saw that from every visible mountain range great columns of living intense black were pouring upward to join and feed the immense funnel that whirled around them.

"They are leaving the world," Nadja cried triumphantly. The view blurred. Savary smiled.

"Even if we perish we have at least given Earth a respite—a respite in which they can build more revitalizers and strengthen their defenses. One thing

only I regret—that we cannot get a message through to the World-Council, telling them that the sound-vibrators work."

Nadja swung around on him. "We can," she said. "Do you remember across what leagues of empty space Telzon and you and I reached and compelled the minds of the rebellious robots? With Zonlor's help we can reach Earth with our minds."

Savary consulted the old Lyddan with his eyes. The latter inclined his feathered head. "Your Older Ones have good minds—there should be no impossibility in reaching them even though they are unfamiliar with thought-transmission. Matter—however dense—cannot interrupt the radiations of thought, and our three minds are very powerful."

Savary flung himself into a seat beside Nadja. His hand touched hers. A glow ran through her, for it was a brief lover's caress snatched from the abstraction of their epic struggle for Earth's life. He spoke briefly.

"Lu-Fein will be on duty in the inner Council Room at this time, will he not, Ramoneda?" Only half comprehending, the Chilean president nodded.

* * * * *

Within the silver and ebony room, countless leagues away, Lu-Fein felt eerie fingers plucking and calling to his mind. Like a noose tightening, the current of space-bridging thought slowly knotted itself around his waking and answering brain.

Words began to filter through—winging through matter beyond the scope of man, through ever-widening abyss of space. They slowly formed sentences which galvanized him to strained attention. Word by word, the message from the distant captive *Victory* moved mysteriously across the void.

It ended and there was brief silence, then Savary's thought vibrated within his own once more. "That is all. We are going, I think, to their moon. We shall try to conquer them. If we fail, remember that we died willingly in the service of Earth."

He stopped. The mind of Zonlor pulsed alone across the void.

"Remember, too, Earth-leader, that it will be Lydda's pride to feel one of her race died in the service of Knute Savary's world."

Another mind followed his across the widening gap—Ydraas'. His race was no stranger to thought-transmission. "And Speira gladly gives a life that the planet of Knute Savary may live."

The thread was broken. Somewhere above the shrunken air-envelope of the beleaguered Earth the *Victory* and its small and strangely assorted crew were whirling upward into a spatial night far less black than the vortex of the dying, yet ever-replaced things that carried them.

CHAPTER XVIII

The Red World

WITHIN the space-ship time lapsed into monotonous rhythm of self-enforced sleep and waking. Ydraas and Ramoneda and Gordon worked under Nadja's directions at the task of overhauling and testing the vast array of weapons on the great space-ship. When this was done they watched the meaningless hours march foolishly around the face of the time-recorders.

Savary remained locked within his laboratory. Once Nadja went in to help him test the tensile strength of a blended alloy of stelumin and vulcan and saw the marks of sleepless vigils on his hollow-eyed face. Meanwhile, the dark stream that bore them flashed ever upward through the hidden skies.

At last—Nadja had marked the course of six days on the time-board—the mad trek of solid matter through the airless void seemed to slow and falter. The speed-indicator hovered and almost stopped. Savary came out of his laboratory at Nadja's call. He glanced at the speed-indicator and nodded.

"Six days," he said. "I thought they

would take about that time. Now we shall see what kind of a world these creatures come from. Nadja, you stay at the controls.

"Zonlor, Ydraas, Gordon, Ramoneda —will you assist me in dismantling four of the heat-guns and installing new weapons in their place? They will have to be connected directly with the solar-power reservoirs as they have no motive power of their own. In any case their consumption of power is so immense that we must use them only in the last extremity."

For awhile, as they toiled at desperate speed, the ominous immobility in space persisted. Nadja and Ramoneda were standing at the controls, looking eagerly at the dead-blackness of the vision-plate, when they began once more to move.

A shiver seemed to run through the prisoned ship as the grip of the solidified things vaporized around it. Then the indicator on the dial, set to show any deviations from the space-vessel's straight route during space-flight, began to revolve at an appalling speed. Spinning like a top the *Victory* leaped upward as the great column of the moon-things swirled ahead in a mighty rotating jet.

Across the viewless vision-plate the dead-black melted before a red glare. Even as Savary hurried back into the control-room from a final inspection of his new weapons the vortex that held them fast opened like some foul unfolding flower, whirling them downward towards a vast surface of viscous inky liquid that glowed with the sultry reflected glare of some invisible light.

Savary uttered a low exclamation. "A world of liquid gases! They must be instinct with some inner super-cold of their own or the approach they have made to our sun would have volatilized them."

Suddenly the girl cried out. Beneath them the floor of the black planetoid had opened in a vast fissure that split the tides of liquid gases from pole to pole. Like some gigantic wound torn by Titan hands in the alien world's flanks it lifted jagged ramparts of torn and twisted debris high into the sky. From its unplumbed depths poured a sultry crimson glare.

Ydraas turned to Carl Gordon. "If that is the reflected glow of some internal fire I think we are near our end. Even if the vulcan walls could resist the temperatures that live at the core of a world we shall all be incinerated within our triple hull."

The air-guard's lips set thinly. "Nevertheless, we may be able to do them some damage before we die," he said evenly.

Savary stared down at the abyss with intent eyes. Like aimless wounded birds the leaders of the great column of fleeing things were palpitating around their world. Nearer and nearer it drew till the full immensity of the chasm torn in the dark planetoid's side was revealed to them.

As long as the small sphere itself it measured at least a hundred miles from wall to wall. The tortured pinnacles, rising in grotesque shapes above it, were as lofty as the highest mountain of Earth.

"This must be the token left by its collision with our own moon," Nadja said.

Savary nodded, gave a sharp order. "Everyone to his place."

NOW the great jagged cleft was opening its glowing jaws immediately beneath their keel. Still circling in the whirling hold of the black vortex that bore them they sank closer and closer to the weird glow—a glow, which, strangely, the black legions seemed to have no power to dim or intercept. Immediately to their left, the torn and twisted ramparts of the red gulf reared to titanic heights, holding back like some vast tortured dam the sluggish and ominous wash of the liquid gases forming the surface of this world.

Around them the vast width of the glowing chasm was filled with the vaporous legions of their foe. Savary noted that most of them seemed to have expanded to their thinnest vapor-form and gave a command.

Out from the space-vessel swept the

almost invisible sparkle of the disintegrators. The stricken ranks of Stygian black around them melted forthwith in great swaths. Out to the walls of the chasm, the terrible rays flamed in annihilating waves.

As they touched the glowing cliffs long streaks of darker red sprang out across their flamewashed surface—sprang and widened like ripples around a flung stone. Eating inward, the rays cut pits and caverns out of the jet-like substance that was the rock of this new world.

The Stygian millions of the foe pulsed in a whirling horror. After the terrors of the sudden collision with the terrestrial moon another threat of destruction was attacking their world! They faltered and began to condense into their most invulnerable form but Savary's hand was on the levels of the rocket-tubes.

Before they could solidify, the rockets flared in a brilliant burst of flame across the somber red of the surrounding glow. Leaping ahead of the vanguard of the foe the space-ship swept—not up and outward but down—into the chasm.

The old Chilean—the only one not inured to spatial acceleration—reeled under the impact of their vertiginous flight. Nadja caught him as he was about to collapse and poured a strong dose of restorative down his throat.

When he could speak he said weakly, "I am the only useless member of your crew. I should apologize for having come."

Nadja helped him to a couch. They were still flashing down at an indescribable speed into the heart of the Black Moon. Suddenly she felt the slight jar of the breaking rockets. Leaving Ramoneda, she turned to the vision-plate to see the vast arch of the chasm open beneath them into a realm of strange brilliance.

They were floating in a vast hollow whose limits could not be perceived. Everywhere amid the tides of the turgid glow around them swirled the countless eddies and angry vapors of myriads of jet-black things. The light in which they swam and floated came from no delimitable source—an unfocused radiation, living and pulsing ebb and flow of hostile power.

As he pulled himself to his feet the Chilean president saw the ruddy glow from without reflect itself on the tense faces of his companions. An exclamation tore itself from his throat as he turned and beheld the three-fold thick walls of the space-ship apparently melting away before his appalled glance.

FOR a moment the faces of the remote and reflective-eyed Lyddan, of the ethereally beautiful Speiran, of Carl Gordon, were flooded with that ominous glow. Then Savary's hand reached out for the light-switch and darkness swept around them.

Savary spoke reassuringly. "That light generates heat of a sort but not enough to fuse our plating. I think these things live on light and can absorb it only when vaporized. This is their habitat and this light is probably their source of nourishment.

"Whatever this light is it can evidently penetrate even such compact substances as vulcan but when I switched off our own light, its interest in us ceased. You may have noticed that our lights were dimming?—even as our searchlights did when we turned them on the things on Earth. At the time, this gave me an idea. What we have just seen confirms it.

"And now that we know something about them—we can fight!"

The disintegrators had been switched off in their mad acceleration down the abyss. Now they stabbed out in a circle of destruction before which the somber unwarned legions of the vapor-things, swirling everywhere around them, reeled.

From the gaping chasm that slit the roof of this world came pouring the vanguard of the great column they had outdistanced while—as if its answer to a voiceless cry for help—the remote reaches of that endless hollow began to empty their tide of Stygian creatures toward the vortex that whirled around the flaming *Victory*.

The disintegrators began to hurl their

pale radiance against a more impervious foe. For miles around the molecules of the Moon-Creatures were condensing and contracting like the circles of a semi-solid whirlpool. Every minute they were opposing to the destructive rays a more and more resistant front.

Sparks began to cascade back from the closing walls and Nadja saw Savary's face grow grim. She bent over the vision-plate by his side. The red glow had vanished—blotted out behind immeasurable depths of solidifying substance—and as Savary switched the disintegrators off and gave the signal for all the sound-vibrators to be flung on she read the misgivings in his mind.

For a moment, as the death of the sound-vibrators struck out at them, the solid wall around the space-ship crumbled. Then a slow tremor shook the prisoned craft. In the darkness they heard the ominous grind of straining metal.

Hurrying into a space-suit, Gordon made his way into the exterior airlocks and sent back a shout of frantic warning through the dial-phone. At half a dozen places the outer wall of vulcan was buckling inward. The clotted things—backed by the incalculable pressure of all their species—had found the joints of the *Victory's* armor.

"The weight behind them has forced them in between the outlets of the sound-vibrators," he said grimly. "The *Victory* is caught."

Another and another tremor shook the buckling hull. In the outer compartment of the *Victory* Gordon saw the space-proof walls bulge slowly. Behind each vise of immeasurable weight lay the league-deep pressure of a vengeful world. Slowly, the mighty walls sagged and groaned. He flung one more frantic warning into the wall phone at his side, then turned to face the death that in a moment would overwhelm them all.

Savary's hand hovered over the switches releasing the four new weapons but Nadja acted suddenly. Her arm flashed above the glow of the dial board and a lever swung down. The most antiquated of all the space-ship's equipment—the great heat-guns that had exterminated the Nerea of Sakka—flamed into life.

Hurling itself from every pore of the space-craft, the white-hot flame of the released guns met the atomic wall locked around them.

"They will destroy us!" Zonlor thought. "In a moment, the guntubes themselves must give away—or the hull fuse!"

But Savary had seized the idea in Nadja's mind. Tensely, he held his hand from the dial-board, waiting—risking everything on the chance she had seen and played for—played for rightly! In the infinitesimal space granted them, the flaming tide flattened and spread like a sheet of living fire, and as it spread the ring that held the space-ship in its appalling clutch began slowly to dissolve along its inner surface. Carl Gordon turned to the wall-phone at his side. "The pressure's relieved! The walls are holding!" he cried.

Savary's eyes met Nadja's. Her mind had outspeeded his for one brief moment and had saved their lives—for awhile at least.

As she sped out to verify the damage Ramoneda wiped his forehead. "But why does the heat-ray affect them when they are impervious to the disintegrators?" he asked in a shaken voice.

CHAPTER XIX

Out of Power

SAVARY looked at the vision-plate. It showed white washes of terrific flame as the heat-rays coursed within the widening margin left between the hull and the solidified things. He spoke briefly.

"They are vaporizing so as to absorb the light of the heat-rays—for the heat itself they care nothing. It would take something like the heat of the sun to melt a substance such as theirs. But light is their food—this is the complete proof of it.

"As a matter of fact, creatures that live on light represent an order not so far from our comprehension. Organisms that live almost exclusively on air exist on our world. The human frame itself draws nourishment from the sunlight. From that to organisms that feed exclusively on light-radiations is only a short step."

"Do you think that light is their only food?" Zonlor thought curiously.

"Food is only a form of speech—it is their source of energy, like our food, but the method by which they absorb it may not resemble our manner of eating. No. I think that they draw into themselves at least one other form of radiation. The new weapons I constructed are based on this belief."

Nadja came back to the control room at this moment, followed by Carl Gordon. "The walls are intact and they seem to be vaporizing," she said. "I slipped back the observatory's outer roof long enough to notice that there were streaks of dark red visible through the black."

For a few minutes there was only the throb of the sound-vibrators sending their disrupting rhythms into the densities still pressing around them in the lightless control-room. S i l e n t l y the dauntless crew weighed the value of the respite they had just won from the destruction they hardly hoped finally to escape.

Ramoneda broke the silence. "Our death would matter little if only we could make these creatures pay dearly enough in exchange for them to leave Earth unmolested till her air-envelope is gathered around her once more. But your death, Savary, may be a greater price than Earth can afford to pay for a mere respite."

Savary shrugged. "If Earth is saved, she can evolve other minds. Neither are we dead—yet. In any case, if we die, we shall take enough of the denizens of this world with us to ensure their never troubling Earth again.

"I have set a sort of detonator—it is really a mixture of chemicals that react violently against the traces of these things' substances. At the first rupture of our hull and the consequent penetration of the outer atmosphere it will explode the chemical contents of my laboratory and change the *Victory* into a bomb of such lethal power as may well disrupt even these creatures' alien molecular composition. But that is only the last weapon."

Beyond the admixture of Stygian darkness and the white flame of the heat-guns long washes of lurid red were filtering in as the ranks of the black moon things vaporized gluttonously to feed on the new, white-hot brilliance that was being bestowed upon them.

Suddenly the terrible disintegrators replaced the flaming rays of heat. The stricken myriads swirled in a panic as blind as that which had fastened on the things besieging Earth. As they eddied in dissolving clouds of jet around the lethal fans of pale radiance the rocket-tubes belched out their blasts of fire.

Upward through leagues on leagues of the whirling, palpitating vapors, the *Victory* hurled her flashing length of metal on its liberated course. Suddenly, they were free—free and hurtling across the enormous caverned home of the invaders of Earth.

Before Savary could brake that mad acceleration all sign of the vast chasm down which they had come had vanished in their rear. They sped alone in the endless washes of the lurid light, their myriad foe left far behind.

For a moment, only the flare of their braking rockets kept them company in that shadowless sea of light. Then Ydraas uttered an ejaculation as he glanced at the vision-plate. Like water vaporizing in the sun, the white-hot brilliance of the rocket flares was being sucked away into some remote reaches of that all-pervading glow.

Savary switched off the rockets. They floated almost motionless in the still intensity of that unreal glare. Suddenly, Nadja exclaimed: "They are coming after us!"

AGAINST the red light that filled the horizonless world the dead-black tides of the things were pouring upward

in billows of molten jet. But these were no such fusing and eddying masses, no barely individual conglomeration of pugnaciously stupid matter.

Enormous and tentacled, with pseudopod outshoots of fluctuating jet, each was a distinct and individual entity, pulsing with an ambience of ultrahuman hate.

Nadja felt a horrible, gross tide of uninterpretable violence sweep across her psychic senses. "These are not like the others!" she cried softly. "They have minds that are beating out a message! Zonlor, what is it that they generate?"

The old Lyddan's mental composure was shaken. "Hate and triumph," he answered. "These are the servitors of some power they worship or obey—priests or attendants of something for which they covet us as food."

The disintegrators swept out towards them with a lethal flare but the things expanded like lightning, thinning out to an impalpable vapor, more tenuous than anything their weaker kindred could achieve. Soon they were no more than vague shadows of motion, drifting ever closer across the red washes of their underworld light.

"Half the disintegrator-rays are being lost in the spaces between their expanded molecules," Savary said grimly.

He flung on the heat-guns but the slowly enfolding tides of the mounting vapor-foe disdained their trap. Impervious to the flames around them, dying but only in comparatively small numbers under the pale fans of the disintegrators, they billowed upward around the floating ship. The solidified tentacles reached out and met the full blast of the sound-vibrators that Ydraas had—at Savary's nod—flung on.

A few of the strange feelers melted away into powdery dust, but others grew out of the still vaporous bodies and swathed themselves around and around the death-hurling ship. At an incredible speed the tenuous mists solidified to black units of appalling weight, wove an unbreakable net around the fighting ship.

The vision-plate darkened but not wholly as when they were locked in the solid density of the fused other-things. Through the twining tentacled net, dark smears of sultry red continued to burn from some far-distant space. Then the space-ship gave a lurch and began to move without volition of its own. Slowly, they were being borne down into the invisible vistas of the luminous world.

Under Savary's hands, the *Victory* became a splitting monster of death-dealing rays. Swaths of impalpable mists vanished under the stabs of the disintegrators. Crumbled dust of trans-stellar solidity sank in a constant shower into the fathomless ocean of fluctuating crimson through which they fell.

But, ever reforming itself around them, through the laws of some atomic principle culled from another constellation, the substance of the billowing hate-charged eddies renewed itself constantly and shot out more and heavier tentacles, filling up the gaps torn in their ranks.

They were descending toward an ultimate brightness of palpitating crimson whose radiations were almost beyond the endurance of mortal eyes. Something in the violence of that upward-beating light made Savary screen the vision-plate to its smallest proportions.

"Turn your eyes away! That light is deadly!" he barked over his shoulder.

He himself, however, did not cease from bending over the reflection of that lethal glow. While the pupils of his eyes seemed to distend under the radiations beating up against them he stared down at the scene below. As far as he could see the evil brightness of that lurid floor stretched and pulsed and palpitated.

Here, without doubt, was the heart and focal center of the subterranean world's life, the source of its ocean of almost material light, the energy-bestower from which came the vitality of that strange and deadly inner empire. Some ominous presentiment of its power made Savary swing around, one hand veiling his tortured eyes, and fling an urgent order at Nadja, who stood ready at his side.

Two minutes later, as he bent over the blazing violence towards which they

sank, he saw the wavering, puny shadow of an ingot of vulcan that the girl had fetched from the store-rooms, drop downward toward the crimson inferno. For a moment, he followed it with his half-seared eyes, then an exclamation burst from his lips.

As it touched the dazzling expanse below, a sheet of intolerable brilliance flared up around it. Before his glance its substance—vulcan as perdurable as the *Victory's* hull—melted and dissolved into new radiations of still intenser flame. He measured the distance between them and that waiting glare. In another ten minutes they too would suffer the fiery annihilation of that fate!

DECISION spurred him to his feet. All their defenses had been tried and proven too weak.

"Gordon, Ramoneda, Ydraas, Zonlor—man the new weapons immediately," he called tensely. "We have only ten minutes. If we touch that floor we are finished. Nadja, stand ready to take my place if my eyes should give out. When I give the signal trip the switches of each of the four cylinders. If they work I think I can tear the ship away from these things' hold."

Like hounds released to the boon of action, the four sprang to the switches of each of the mysterious cylinders they had helped set in place of an equal number of heat-guns. Savary tried at the same time the last navigating trick he possessed, one impossible in a weaker craft.

Releasing all the port-side rockets at the bow simultaneously with the starboard and rear ones, he gave the ship such a fierce twist that it tore itself—rotating like a flaming pinwheel—out of the clutches of the tentacled servants of the fiery floor.

A golden glowing vapor sprang from the four ports, from the new weapons Savary had developed. Out towards the billowing pitch-black multitudes of the inner world things it spread in soft fan-shaped plumes—down in delicate shimmering puffs toward the awful floor of lethal light. A minute, two minutes passed, while the cylinder of mighty vulcan rotated upward in flaming gyrations that threatened to tear it asunder.

Suddenly Savary braked their wheeling flight. Around them as far as the eye could plumb the glowing inferno, the whirling legions of things had clotted in vaporous masses around each soft golden cloud or plume.

With startling suddenness, they began bursting apart, spreading and tearing out into thin filaments of greying vapor whose very hues were that of death. A minute more and the first of the pink-shot golden puffs had floated down to touch the blinding floor.

It blazed up fiercely and Knute Savary, unnoticed, flung one hand across the tearing agony searing his eyeballs. Then—like some stricken thing—it shivered in a terrible convulsion that rippled away in endless shuddering vistas. Its fierce radiations dulled till the eyes of those within the space-ship could face them unimpaired.

"Take the controls, Nadja. Aim for the chasm," Savary said briefly.

Like a freed arrow, the space-ship soared higher and higher into the dimming radiance of the horizonless world, unhindered by the stricken foe, while around them the infinite drifts and eddies of the things clustered and sucked at each new puff of golden vapor, only to burst apart by some explosion within the heart of their molecular life.

Far away from the lethal depths to which they had been dragged the *Victory's* crew flashed within their liberated cylinder. The shuddering exploding ranks of the foe made no attempt to follow them. At a sharp order from Savary the four new weapons were switched off and they sped in a vast solitude—far from the dying creatures who denizened this world—heading for the gaping chasm caused by the inter-lunar collision.

The purr of the solar-engines faltered and slowed. Savary stiffened and his mouth grew grim. The flame of the rockets dwindled to a mere trickle that dripped forlornly at the ports in heavy drops of fire. Nadja cast one look at the

power-indicator on the control-board.

"The solar-reservoirs are empty. We have no power left!" she said with whitening lips.

CHAPTER XX

The End of the Things

ZONLOR, Ydraas and the two Earthmen followed Nadja back into the control-room. In silence they heard the words that spelled their end. About them the space-ship's mighty engines had ceased their throbbing but, born by the impetus of its flight, the great cylinder still flew through the red glow of the black moon's heart.

Not one face blanched as destruction all the more cruel that it came at the very moment of victory—looked them in the face.

Nadja spoke with an undaunted smile, "Well, at least we've done what we came here to do. Earth will be free of these things for good."

Carl Gordon cast his eye down towards the vision-plate and spoke quietly. "There is the chasm opening above us."

A mile or so above the space-ship the towering walls of the great planetary wound rose up to the remote and invisible gateway beyond which waited the pure reaches of spacial night. In supreme irony it opened the way for an escape now rendered impossible. Suddenly, however, Savary swung on them.

"There is still a chance! Nadja—the emergency power reserves stored in each rocket-tube! Turn them on. They may get us to the surface. Once there we can refill our reservoirs from the direct rays of the sun."

The girl slipped back into her seat. Her fingers pressed a row of hidden buttons concealed under the edge of the dial-board. The rockets woke with a cough and purred anew. Then, suddenly, Nadja slowed them to a whisper. Eddying down from the chasm above their heads, the belated rear guard of the Things that had fled Earth were pouring in a vast column.

Even as the minds around him reeled before this final blow to their rewakening hopes Knute Savary leaped to his feet.

"There is one last hope," he said. "Wait here and give the ship all it will stand if the chasm above clears even for a minute."

He moved towards the door and Nadja cried out, "Where are you going? Knute! Answer me!"

He turned and explained hurriedly. "If we charge them with one of the rocket-boats there is a chance that they will solidify as one mass around it—they have a bulldog's blind pugnacity—and thus clear a passage upward through the chasm."

The girl leaped up with a frantic cry but he was already without the room, racing for the nearest rocket-boat berth. Ydraas and Gordon were already on his heels. Zonlor followed them, his thoughts deeply shaken.

"I will go," he cried after Savary. "I am an old man. Death is my due! Your life is too valuable—none other could replace it!"

Savary's hand was already on the door of the rocket-boat compartment. As he wrenched it open he spoke curtly over one shoulder. "This is my job. I am captain here." Before they could reach him, he had leaped into the small room where the rocket-boat lay berthed. But immediately he drew back! The boat was no longer there!

The three racing after him flung themselves upon him from the rear. They too stopped and stared. As they stood there the soft hiss of escaping air and the clang of the outer door of the rocket-boat's outer-chute told them what had happened. Gordon flung a quick glance at Ydraas and Zonlor. Nadja had stayed—agonized but inflexible—at her pilot's post.

"Ramoneda is gone!" he said in a shaken voice.

As the little craft slid out of its chute into the red glow of the Inner World, the old Chilean aristocrat smiled with

something of the gay arrogance of youth. Nursing bitterly as he had done the feeling of being useless impedimenta on the *Victory*, he felt a new lightness in his heart as he headed his small craft's nose towards the swimming billows of dead-black above his head.

The black vapors swirled down towards him from the red washes of the lurid sea of light. Dumb malignant tentacles reached out towards the frail stelumin shell that carried him. Carlos Ramoneda's mouth set to a grim steady line. With inflexible eye, a president of distant Earth went hurtling to his death!

Within the space-ship Nadja uttered a sob as she saw the slim, slivery craft speed forth like a loosed arrow towards the Stygian waves of black above. When Savary entered the control-room, she stared at him and swayed, while for a moment everything around her turned black.

He stood above her and spoke slowly. "It is Ramoneda. He must have slipped past me or out through the other door when I turned to speak to you."

ON the vision-plate without they saw the little ship touch the vanguard of the vaporous column. As Savary had foreseen it eddied in a constricting whorl of dumb animosity, then began to clot like a molecular vise around the vortex in which Ramoneda had vanished.

Savary spoke in a strained voice. "Don't waste his sacrifice, Nadja."

Off to the left, half of the chasm had opened clear and without shadow of the things. Toward that clear space, the ship flashed upward like a stone from a sling. No foe moved to bar their way.

Behind them the appalling constriction of the vapor-things slowly expanded. A twisted scrap of stelumin fell from their vaporizing heart. Wavering slowly, the crushed remnant of a rocket-boat floated slowly downward through the dulling crimson world. Infinitely far beneath it the sick but still evilly glowing floor waited to fuse it in its clutches.

The reckless climb continued. Between walls of deep and sullen flight they flashed, their rockets singing wildly behind them. Acceleration tore and hammered at their pulses. Suddenly an arch of darkness opened overhead.

"The sky! I can see the stars!" Ydraas called out exultantly.

Up and out they flashed, describing a long parabola as they left the alien world for the clean night. The cold washes of the sleeping gases stretched somberly below them as they fled.

"We must not only win free from the abyss," Savary said warningly, "but far enough out in space to overcome the attraction of the planetoid." Already, the Black Moon was growing spherical beneath them. Then the rockets spluttered, coughed once or twice, and purred to a rest.

Nadja clicked her teeth together grimly. "Our momentum must carry us free," she said.

Zonlor cast a long measuring glance at the Black World below and shook his feathered head. "With any other world, it would suffice. But this one holds us still. Its pull is in proportion to its density—and that is far greater than Earth. We cannot get free!"

Savary laughed suddenly. He had remained seated in silence beside Nadja, seemingly content to leave the piloting of the space-ship entirely in her hands. Now he said, "I think we can. Steer so as to use our momentum—not to get away from this accursed sphere. Zonlor is right. Its density is too great to be conquered by mere momentum.

"Swing the ship into a temporary orbit around it. Our solar-reservoirs are already charging. If we can circle the planetoid for an hour or two we shall have enough power to tear ourselves away from even its gravitational pull."

Under Nadja's hand, the space-ship swung obediently in a long curve that paralleled the surface curvature of the Black Sphere below. Around them the cold blaze of familiar constellations wheeled silently across the infinite reaches of the sky. On the side of the ship facing the sun the charging reservoirs began to hum softly with the instreaming power.

After awhile Nadja cast an expert glance at the height and velocity indicators on the control-board and said, "We are swinging around in a slowly-narrowing orbit. Before we begin to fall freely our reservoirs will have charged enough power to pull us away from here. Those weapons you used at the end, must have consumed an a l m o s t unbelievable amount of power, Knute."

Zonlor thought curiously towards the silent figure of Savary. "What kind of destruction was it that you hurled at them at the last?"

SAVARY had left Nadja's side when they emerged from the red chasm and moved to a seat at the farthest end of the control room. Leaning back in the shade of the cushioned couch he answered the old Lyddan.

"Molecular disintegration in arrested motion, an admixture of an old discovery with a new one. Years ago I discovered, during some other research a means of arresting and holding in suspension the action of the disintegrating rays. By applying the principle of this discovery to our need of the moment I found another use for it.

"Those golden vapors you saw were highly magnetic gases charged with a potential disintegrating current which contact with matter of a very slight density released. The disintegrating principle disrupts the intimate composition of the atom, freeing electrons and protons so that they in their turn bombard the neighboring atoms and explode them. The action is progressive."

"The secret of how a mind like yours originated on a planet as young as your Earth, is still perplexing our scientists," Zonlor said reflectively. "If this discovery of yours has other uses than destruction—with which Lydda has little to do —it will prove an interesting subject of experiment."

Nadja interrupted the old Lyddan's musings by turning and looking at Savary over her shoulder. "Will you take my place, Knute?" she asked. "We are beginning to drop more rapidly. Perhaps you had better handle the controls."

From the shadowy corner where he sat the voice of Knute Savary came grimly. "I am afraid that you will have to do all the running of the ship from now on, Nadja. I gave over the controls to you because I could no longer see. That infernal floor of light has burnt my eyes out. You should have let me get to the rocket-boat before Ramoneda did."

A low cry broke from the girl. There was a stunned silence, during which the *Victory* flew on its silent course forgotten by all save the wheeling stars whose faint gleam of light brushed frostily across its shining hull as it flashed through spacial night. Then Zonlor hurried across to Savary's side and examined each nearly disrupted eyeball carefully.

He spoke authoritatively. "The sight is gone—but you will see again. Our scientist-doctors of Lydda can mend your burnt-out retinae. Medicine is an old science in our world. A mind such as yours cannot be allowed to be crippled by blindness."

An almost imperceptible flash of emotion passed over Savary's face. "My thanks, Zonlor," he said. "I had thought myself henceforth useless. Now, Nadja will be my eyes till we get back to Lydda. How much solar-power have we stored so far?"

Nadja looked at the indicator. "Nearly half our capacity."

"Enough to tear us away if we choose," Savary commented.

"If we choose?" Nadja questioned with a lift of her eyebrows.

Knute Savary smiled grimly. "Since we have done so much, why not finish it?" he asked. "If we let this foul world exist within a system where it should never have come, the danger of an invasion of these things will always overshadow Earth.

"There are many still alive down in that unnatural realm of theirs. All those who killed Ramoneda are still untouched. They may spawn again and return one day to attack our world. We cannot leave till we have destroyed their sphere!"

Ydraas smiled at Carl Gordon's

amazed stare. "It is no harder to destroy a world than to recreate one from the desiccated bones of half a million years of desolation," he said.

Nevertheless the air-guard looked over at the blind still face of the man opposite him. "But what can one space-ship, however mighty, do against the planetary mass of a sphere such as this?" he asked.

Savary smiled a little. "We shall make it destroy itself. But to do so we must once more imperil our chances of seeing Earth again. Are you willing?"

Nadja's glance swept them keenly and their eyes gave sufficient answer. "What shall we do?" she said.

"How far are we from the surface? Can you sight the great chasm by which we entered?"

Nadja looked down. "It is just ahead of us. We will pass over its eastern rim in five minutes."

"Let the ship circle the planetoid once more. Use the rockets if necessary—but as little as you can. We need to store more power for what we have to do. When we draw near it once more brake and tell me."

CHAPTER XXI

A Vision of the Future

CIRCLING lower and lower in an ever-contracting orbit they flew above the oily tides of the black world. Carl Gordon shuddered as the frozen depths of liquid gases eddied and dimpled closer and closer to their keel. Everything about this alien world was hostile to his human instincts.

To the feathered Lyddan, no one world was more unusual than another—long centuries of knowledge had sapped the power of wonder in his race. To Ydraas of Speira, whose youth had sunk to sleep under the spell of a planet's death, whose flesh and blood had known the awful isolation of a million-year-later awakening, all horrors or emotions were but incidents in this new life to which he had been translated.

Nadja gave the space-ship an occasional spurt of the rockets but even so, its keel seemed almost to graze the ominous wash of sullen liquids beneath. It sped towards the lurid glow that indicated their approach to the great chasm ahead. At last the great planetary wound stretched beneath them.

"There is a chance that the forces lying latent within these liquefied gases are enormous beyond our computation," Savary said gently. "Equally so are the dissolving powers of the floor of their Inner World. Choose a spot where the dividing wall is thinnest, Nadja, and cut through it with your disintegrators."

The braking rockets flamed across their bow and the pale ray of the disintegrators sprang forth to caress the twisted peaks. At the touch they began to crumble and dissolve.

Ramparts of jet-like stone blazed briefly. Great crevasses grew and widened above sudden tunnels blasted from the trans-stellar rock. The red glow of the vast gateway of the Inner World illumined the play of the devouring rays while above wheeled the lidless stars, distant and disinterested spectators of a duel such as space had never seen before.

At last—with an unheard but mighty crash, the undermined summits swayed and bowed their heads. For more than a mile, the crumbling ramparts swayed and bowed. Then, in a black torrent of mighty boulders and pebbles cast as mountains, the dividing wall hurled itself into the ruddy inferno below.

Savary spoke sharply. "*Nadja!* Get away from here as fast as you can. Give her all the acceleration we have. Hold the space-drug in your mouths ready to swallow if the acceleration becomes past endurance, but hang on. This is going to be a race with destruction!"

Beneath them, the slow and sinister spectacle was sweeping on to a climax. With sluggish reluctance the aeon-old sleep of the liquid gases had wakened to motion. Like some semipetrified torrent it was slipping out over the edges of the broken ramparts, along the ra-

vines dug in the jet-like rock, widening and eddying as it flowed till its black red-washed waves were at the very lip of the abyss.

Like some inky Niagara's brink they seemed to curl and falter there, to poise a moment like some arrested destiny above the glowing gulf beneath. Then, in one mile-wide, massive jet, they poured themselves into the yawning mouth of the subterranean world.

EVEN as she swung the space-ship's head around and pointed it toward Earth, Nadja saw the distant surfaces of the gaseous sea stir and swirl and toss in short thick waves as far as eyes could see—all converging on that black cataract.

The river pouring itself over the abyss's lip was now a torrent. Beside her Savary said, "Quickly! We have no time to lose!"

The rockets flared, dimming even the glare below. The space-ship leaped across the skies. Swinging the vision-plate backwards towards the rapidly diminishing sphere, Nadja saw a vast flaming cloud of vapor pour upwards and fill and overflow the distant gash of crimson that was the Black Planet's cosmic wound. Recklessly, she flung the throttle of the rocket-tubes to their full width.

Like Savary she knew now what dread convulsion might yet catch them in its cosmic might. The stars seemed to reel about them in a maddened sky—the weight of all their merged universes seemed to press upon their gasping lungs and agonized frames! Then the narcotic of the space-drug seeped through their veins, giving them its brief respite.

When they came back to their senses the black sphere lay far in their rear. Nadja heard Carl Gordon utter a choked exclamation and dragged herself from the last bonds of coma to bend over the vision-plate. Beside her Savary's voice called out, "How much more acceleration can we give her?"

Conquering the wracked agony of leaden limbs the girl consulted the indicators and saw that they registered—for the first time in their existence—their highest possible speed.

"No more," she answered. Then she turned to the vision-plate and tightened her hold on Savary's arm.

Far behind them the Black Moon hung like some immense, smoking bomb. Above it floated a great plume of brilliant vapor. From the mighty chasm clouds of flaming gases, generated by the volatilizing of the dormant elements within the crimson world, expanded till they formed a great banner of seething light that seemed to be hurling its long, fiery tentacles across the widening gulf of space in pursuit of the racing *Victory*.

"What a spectacle! What's going on down there?" Gordon ejaculated.

Savary, picking up Nadja's mental description swiftly, spoke. "Annihilation—an annihilation which may yet sweep us up in its outer fringes."

The long streamers of flaming gases —in c o n f i r m a t i o n of his words —reached out after them and gained on them in that strange race of unsentient matter against life-impelled metal. Nadja had a swift vision of the glowing inferno from which they had escaped, whirling with the tides of volatilized gases and filling with the terrible potentialities of their suddenly awakened substances.

Even as her fingers clamped on the levers of the rocket-tubes—seeking to wrest from them every last ounce of power they might conceal—the advancing billows brightened to an unendurable brilliancy, became suffused with strange hues of crimson and purplish-black, expanding and writhing across the constellated skies like some vast octopus of flame.

"Zonlor, read the spectrum of those gases. It may tell us something of the composition of that world when—and if —we have time to study it," Savary said quietly.

The old Lyddan obeyed. Knowledge was greater to him than even the spectacle from which he turned. Though their life hung in the balance it must be served. When he turned to the vision-

plate again the *Victory* was streaking across the sky like an arrow of flame but behind it—ever vaster and more threatening—raced and spread that immense whorl of indescribable brightness.

Slowly the advancing billows seemed to falter and retract their outermost tendrils of flame. Like an opening incandescent flower the floating banner of seething gas widened and curled back on itself. At its heart the Black World hung for one brief moment—clear and distinct, though shrunken by the distances already set between.

A great gash of blinding brilliance etched the abyss that sundered it in two, and from this mighty wound the flaming gases momentarily ceased to pour. Briefly, they saw it float there, somber and alien as its brood. Then—in an appalling maelstrom of pure flame—it dissolved!

THE stunned mortals within the fleeing *Victory* saw the whole arch of the skies vanish behind a writhing corona of black and crimson. Behind them an awful dark brilliancy, a vast conflagration impossible to describe, poured itself out from the crucible wherein had dissolved a world. The glowing van of the billowing gases in their rear leaped forward and swept them upward in the fringes of its seething tide.

Before Savary could command Nadja had flung on the full power of the refrigerating machines. They were flashing through a sea of flame, of whirling, incandescent gases that paled the flare of their rocket-tubes to shadow streaks.

"At least Ramoneda has had a fitting funeral pyre," Savary said grimly.

"What temperature is it outside?" he added after a minute.

Nadja answered quietly. "The indicators have stopped registering."

"What temperature inside?"

"A hundred and ten—and going up."

"Is every cooling unit working?"

"Yes. The rocket-tubes have not fused yet—they are still functioning."

Carl Gordon looked across at Nadja and Savary. "The walls *in here* are growing hot."

Nadja nodded and remarked calmly. "I am giving her all the acceleration she will take."

The ship was still racing in the vanguard of the glowing gases. But the air within her triple shells was growing overhot. The fusing plates of the outer Speiran vulcan began to sweat great drops of melted metal.

Knute Savary, however, had not quite lost all knowledge of what passed on around him. Feeling blindly along the control-board he found the rarely used switches that motivated the sun-shields used as screen against the solar-rays when the storage batteries became overloaded.

He pressed them down and heard the little bell that indicated that they were in working order. As they swung out between the faltering gases and the speeding ship, the cooling system began to win out. The air became breathable. The seething caldron dropped behind though the sightless pilot could only guess at its receding tides of brilliancy. The cold of space began hardening anew the fusing, but still whole, outer shell.

Nadja struggled to her feet and, bending over the vision-plate, cried, "We've won, Knute! The Black Moon is destroyed!"

Knute Savary drew her close. "Yes, we've won. Earth is safe. In a few years her scars will be mended. You and I are free to think of each other, to turn our ship once more towards the trackless ways of space. Speira, Lydda, Marinoe and Reinos await us—and all the still unexplored worlds of that vast stream. We will never be cut off from Earth any longer—but her ways would be too narrow for us now."

Nadja leaned against his shoulder. "Lydda first," she said. "Lydda and your sight back again. Afterwards—all of space! Yes, Earth is too small for us now—but we will come back to her often."

Carl Gordon pulled himself painfully to his feet. Standing before the larger vision-plate, Nadja and Knute Savary were looking outward away from the flaming torch of the Black Moon's pyre,

towards strange worlds of invisible light and unknown racing in the distant asteroid stream.

The air-guard swung his own vision-plate the other way. Earth swam up glowingly within its field—a mighty sphere, pulsing with soft colors against the starry reaches beyond. Across space her voiceless call sped out to him and the vision of her future glowed brightly within his mind. Ydraas touched his arm.

"I am glad that we have saved her," he said. "Some day our worlds will be woven together with invisible bonds. The solar system will be one great union —evolved by your Savary's hand."

Zonlor's grave thought coursed towards them as he staggered to his feet. "A great future looms ahead of us. Fountains of knowledge as yet unexplored will be brought into the union we dream of here. One day we shall all belong to the United States of Sol."

Beneath them, the swaying globe of rescued Earth floated upward. Afar, reborn Speira turned in the conquered night of space. Between them lay an invisible bond. The conquest of space had begun.

FEATURED IN THE NEXT ISSUE!

•

IN CAVERNS BELOW

Visit the Subterranean Lost Nations of Wu and Zu in an Amazing Complete Fantastic Novel that Satirizes All Humanity!

By STANTON A. COBLENTZ

•

BEYOND THE STAR CURTAIN

A Novelet of Future Turmoil by GARTH BENTLEY

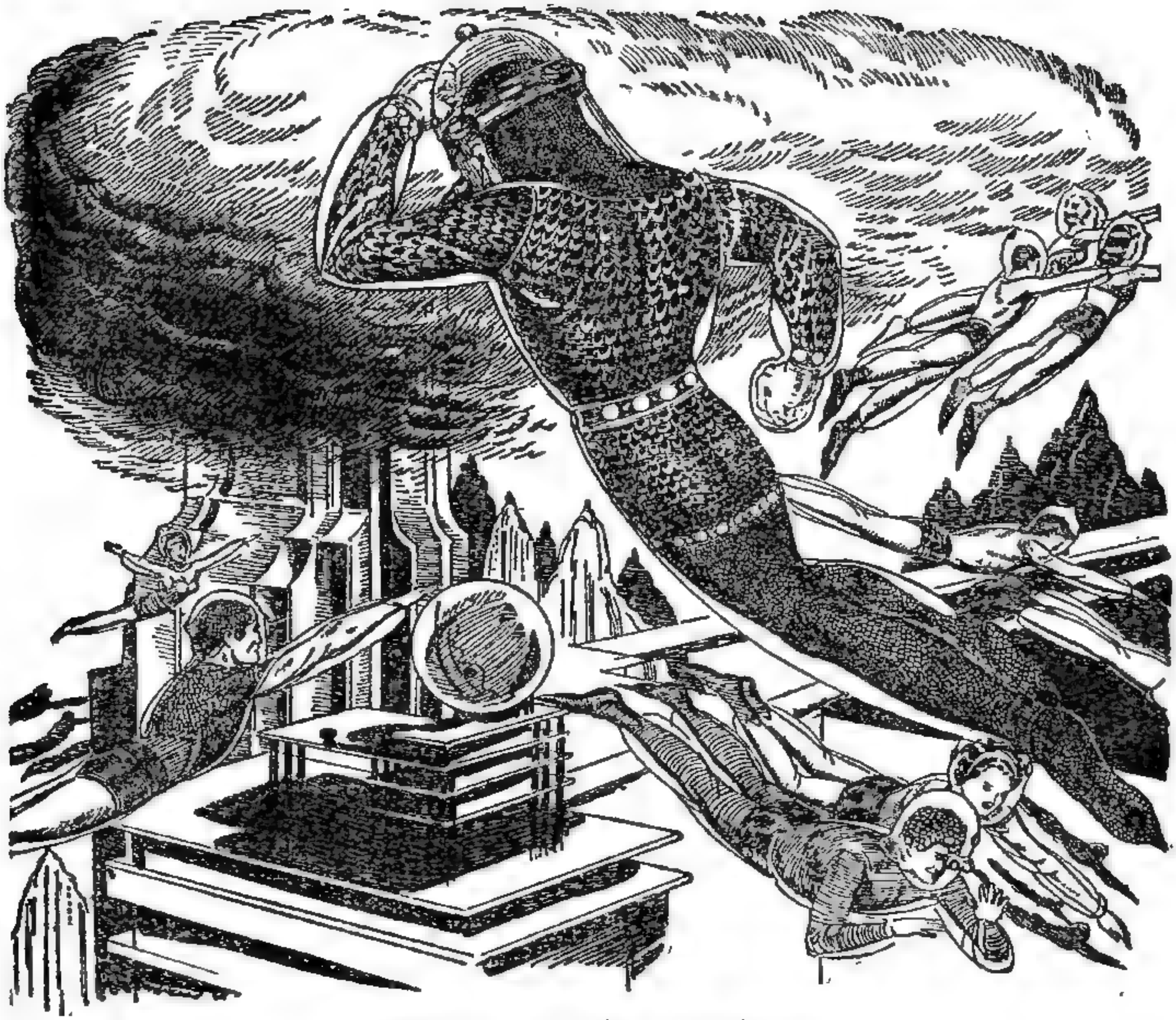
•

THE SPORE DOOM

A Novelet of Startling Surprises by EANDO BINDER

•

AND MANY OTHER STORIES AND FEATURES



Wentworth saw the darkness about the tower

THE LIGHT BENDER

By FRANK K. KELLY

Scientist Hend made man invisible — but not invincible!

THE frosted glass door that led into the private office of Councillor Alvin Wentworth, Chairman, in this year 2030 A.D., of New York City-State, was closed and locked. His prim efficient secretary had received her orders—and to the many and varied numb... who came seeking audience with the great man she gave the invariable answer: "He's in conference."

In the large luxuriously-fitted room Mr. Wentworth *was* in conference. He

Copyright, 1931, by Gernsback Publications, Inc.

sat behind his permentite desk, staring with some misgiving at the two stalwart gentlemen who confronted him.

One was a very tall, thick-set and determined looking man, whose attitude at the moment was one of an insistent request for attention. The other, smaller, wizened but evidently more prudent, looked on in silence.

The two small pasteboards on Wentworth's desk read: *Hend & Rall, Science Engineers.*" To the Councillor there seemed something familiar about the first of these names. Then he remembered—he had read not long before of the prominence and brilliance of engineer-physicist Arnold Hend, who had announced his intentions to visit America from his German homeland on some errand whose nature he refused to reveal.

But the smaller engineer, whom the big man had called "Hend," was silent. Rall had evidently been delegated to do the talking.

He was saying, briefly, "Watch."

Before him, resting on the smooth surface of the desk, was a small object. It was in the form of a hollow drum about a foot in diameter in the center of which reposed a tiny model of an electric dynamo. The only visible controls were two miniature switches—one labeled *Start,* the other *Stop.*

He snapped the first lever forward and pointed to a glass paperweight a few inches from the drum.

The little dynamo turned suddenly. Slowly at first, then with rapidly increasing speed until it had become a blurred whirling shape from which came a shrill penetrating hum.

Wentworth gripped the arms of his chair. Before his eyes a dark pall was clouding up around the paperweight. It began to take on a vague indistinctness of shape as though it were slowly dissolving.

The hum rose to supersonic heights. and at that instant the little weight on Wentworth's desk was gone.

Triumph showed in Rall's eyes. He grasped Wentworth's hand, pushed it forward on the desk to the spot where the glass sphere had been. Wentworth experienced a queer sensation. He was feeling something that he could not see!

It was weird, uncanny. The sweat formed on his forehead. He drew his hand back. "Enough!"

RALL snapped the other switch. He grinned. "Convinced, Chairman?"

"Yes. What I have seen would have removed the most obstinate of doubts. But it's—it's dazing—stupendous! You have achieved invisibility. How?"

For an instant Rall hesitated. Then, questioningly, he glanced at Hend, the third man in the room, who had maintained an enigmatic silence.

"Arnold is much better at that than I."

Hend flushed. For awhile he remained silent. Then, in a guttural German voice, which however was untainted by any accent, he spoke.

"It is very simple. We have only taken advantage of something that all men have known for a hundred years—that gravity is a form of electromagnetism. Einstein told us that in the twentieth century.

"We have always been able in our day to produce powerful magnetic fields and to intensify them to a degree limited only by our supply of energy.

"Around us, unnoticed apparently by all men with the exception of John and myself, is the hugest magnetic field of our experience, one of the most vast sources of energy conceivable—Earth's gravity!

"Science has long known—once more from Einstein—that a powerful magnetic field has a perceptible effect on light rays passing through it. Light beams crossing the sun were observed to have been turned measurably from their normal path, when under the direct influence of the star's tremendous though unconcentrated magnetic field—resulting in the phenomena of light-bending.

"Rall and I have simply combined these two facts—that gravity is akin to magnetism and that magnetism has the power of bending light. We have intensi-

fied by this dynamo of our own construction the whole vast magnetic field of gravity into a directed channel.

"You saw the result—invisibility. The incalculably powerful field of force which was centered on the paperweight so bent the light rays which made it visible to us that they passed around it instead of being absorbed or reflected. If gravity were pure electromagnetism, however, the effect would be a sort of dark 'hole' in space, blotting out the sight of objects around it.

"But gravity, though akin to magnetism, is a separate distinct force—with the result that it not only bends light but renders those substances which come under its direct influence extremely permeable to light reflected from other matter. Thus the paperweight completely vanished."

Wentworth's face mirrored his struggle with incredulity. He said abruptly, "Let's see that again."

Rall made a gesture of impatience. He flung the tiny switch. Once more the vibrant sound of the little machine on the desk filled the room.

Wentworth put out his hand for the second time—expectantly. And then, annoyance on his face, he passed his fingers over the surface of the desk in a searching motion.

After a moment, "I can't feel it. What's the matter? It's gone."

Unbelieving, Rall stared at him. Hend had stiffened curiously at his first words, a strange expression on his strained face—the expression of one who suddenly finds an oft-expressed fear confirmed within him.

He whispered hoarsely, half to himself, "John! We've made a mistake! It's too big for us, for our puny machine. We were too confident in ourselves. Why, it's bigger than matter itself! Don't you see? It has warped the very substance of the paperweight as it has bent its light.

"I tell you I've always feared it. Such power was never intended for man. We must give it up, John, while we have the chance!"

His face was drawn into a mask of terror. His voice trembled, his hands shook. And then, as suddenly as it had come, the paroxysm of fear left him. He fell back into his chair weakly.

Rall snarled contemptuously. He swept his great hand out over the desk. He gave an exclamation of pain, rubbed bruised knuckles. He laughed.

"You simply missed it, Councillor! It's there now right enough!"

He dismissed the incident as a mistake, a triviality. But in his laughter Wentworth detected an undercurrent of nervous strain.

"Look!"

Before them as he snapped the releasing switch once more the little weight was coming into view. The vagueness about its surface was melting slowly.

Again a flicker of victory gleamed in Rall's eyes. It was short-lived.

THE glass sphere on the desk-top had changed. There was an indefinable difference in its appearance, a shadowy impressive indistinctness of outline, a darkness about its surface. It had lost its prosaic look. It seemed a part of another altogether different world.

Wentworth was conscious of a vague foreboding. His mind was crowded with the tremendous possibilities that lay in the tiny, innocent-appearing drum. Surely such a little thing could hold no threat of danger, of menace!

With a feeling almost akin to awe in his heart Wentworth stared fascinated at the inventors of this wonder. Hend, older, more cynical, was a small sharp-featured man, grayed by years, made skeptical with experience.

Rall, almost a giant physically, with a genial nature and an insuppressible optimism, had a keen ever-active brain that refused to admit the existence of the impossible. His was an absolutely fearless temperament.

Between them the engineers formed an almost irresistible combination. Friends of long standing, each complemented the other in nature, intelligence and outlook.

Wentworth remembered his dogged reluctance to be convinced and marveled at his now firm belief. But this demonstration had put an end to all his doubts.

To the engineers the enlistment in their cause of Wentworth, Chairman of the Executive Council of New York City-State and by far the most powerful man in the city, meant all. Closer than they had ever thought possible before loomed realization of their life's dream—invisibility on a practical scale.

They had visions of crime wiped from the face of the Earth by an invisible law force, of the possibility of war abolished by the establishment of an international peace fleet that, invisible, would patrol the airways of the world.

To Wentworth invisibility meant an incalculable advance for the civilization of man, particularly for his beloved city—a stupendous power with infinite promises of good.

Each accepted as sacred the duty of presenting this new force to the world—and each searched his brain for a plan that should be both fitting and impressive.

It was Alvin Wentworth who first broke the lengthening silence.

"My friends, you have much work before you. We have yet to convince the world that invisibility is possible. So you must have some place of absolute secrecy in which to complete your task. That which I have in mind is ideal—the interior of the Peace Tower.

"I alone possess the means of entrance. It has been closed to the public for twenty years. Its very obviousness will protect you. And finally, when you are ready, it will offer a splendid means of demonstrating your power to the world."

He paused. His gaze went from one to the other inquiringly.

Rall was obviously eager, acquiescent. And upon the calm face of Hend was supreme resignation, a fear conquered though not denied.

"What is your answer?"

"Our answer is—yes!" It was Rall's voice, vibrant, impatient. The German's head gave a slow nod. The bargain was complete.

"Then, come!"

Down on the very bottom level of the city canyons there was an eery atmosphere of loneliness. The cold white gleam of the great street globes cast a greenish lifelessness over the vast stretches of deserted pavement. The looming enormity of the buildings that pressed closely in upon the little street gave an overwhelming impression of insignificance to the three who huddled in the long shadow of a crimson tower.

Wentworth sent a white, hissing beam leaping out suddenly from a queer-shaped cylinder in his gloved hand. It struck crashingly against crimson metal. There was an abrupt startling click. A tiny disc embedded in the red wall revolved in a slow measured movement.

The white beam flashed out again. And again, this time with a whirring reluctant groan, the disc turned upon itself. An instant's pause—then once more that crashing cone of coruscating force. Silently the scarlet barrier before them was opening into a dark cavern whose height was hardly higher than a man.

Wentworth turned. His low, hoarse voice whispered, "You have one minute."

They gripped hands. With one last glance over their shoulders the engineers were gone. Wentworth was left to stand alone.

WITH an impatience born of two months' fruitless waiting for some word from those to whom he had given admittance to the Tower, Wentworth reached eagerly for the communication cylinder upon his desk. With trembling fingers he loosened the metal cap. He held it over the desk.

There was a dull thud. On the smooth surface of the wood lay a tiny roll of metallic substance. Wentworth inserted it quickly in a slot that ran the length of a small compact machine on one corner of his desk. He depressed a lever.

An instant's pause—then, "To our chairman, Councillor Wentworth, greet-

lings! Knowing your anxiety and probable uneasiness over our continued failure to report our progress in the enterprise which we have undertaken, we must apologize for our negligence. But events since last we saw you have followed in such rapid order and with such bewildering marvelousness that we have almost lost track of time.

"We have succeeded far beyond our dreams. Within one week after the dispatching of this report the first Light Bender will have been completed. We shall be ready to convince the world in an indubitable manner that our discovery is a practical reality.

"Necessity requires that this report be brief. At high noon on the twenty-fifth of this month (Sol) we shall, in accordance with the plan which you outlined to us on that first day, remove from the sight of man the greatest of all his works—the Peace Tower in which we are. . . . Until then—"

The lifelike voice of Rall ceased. Wentworth felt a great relief surging over his soul. His fears had been vain! After all he had nothing on which to base them, except the queer distorted appearance of the paperweight upon the desk. But as he thought of that distortion his fears returned again, agumented by a greater fear.

What if, as Hend had feared, the inconceivable power generated by the engineers' machine was capable of warping matter as well as light that came within its influence? There had been some who claimed that dimension was determined by rate of vibration. Then if the vibration of matter made invisible was altered also might not the matter be translated into another dimensional plane, to be returned only in grotesque travesty of its former shape?

He shuddered, refused to think of the alternative—that it might not return at all—that the sole reason for the return of the paperweight lay in the comparatively weak energies of the tiny light-bending model.

With an effort he arose, walked to the window. He looked out upon the vast spectacle of the city, asparkle with brilliant night lights, throbbing with a fulsome life. His eyes were for only one thing—the huge overshadowing blotch against the darkness that was the Peace Tower. He sighed. Soon, very soon, all his doubts would be answered. He could only hope.

SUSPENDED between the earth and sky by a slender pencil of force Wentworth hung motionless. He strained his eyes eagerly through the eye-pieces of his air-helmet. His gaze clung fascinatedly to the vast city that spread out far below him.

New York in 2030. Vast spires of shimmering chromium, whitely brilliant in the hard-bright sun—wideflung feathery street bridges of silvery metal—the floating beryllium islands with their great traffic beacons—the teaming airways, packed now with homeward winging millions.

And, most wonderful of all, the power beams—thin streamers of etheric force, pouring out from the laboring solar generators far beneath the city, waves of a mysterious negative gravity that held up all who flew the skies. They were the most marvelous achievement of twenty-first-century civilization.

Wentworth, if he thought of these things at all, did so with pride of possession. For New York City-State in 2030 had acknowledged Alvin Wentworth, Chairman of its Executive Council, as its leader.

In the elections of that fall it had been Wentworth who had stood highest in fitness and intelligence tests of his faction, who had won the biennial contests for the Council by a wide margin.

He gave no thought to such matters now. Body tensed in his flexible metal air-suit he had eyes for but one point in all the vast panorama below. That was a spot near the center of the city. There, raising its crimsoned sides three thousand feet toward the sky, was the Peace Tower of 1990.

It was acknowledged the summit of architectural achievement. To its construction had been brought the best efforts of the world's greatest artisans.

It had been born of an inspired time—the years immediately following the holocaust of the Third World War of 1990, when a planet gone mad in a frenzy of rejoicing from the horrors of scientific warfare, had poured its all into a stupendous memorial of thanksgiving.

Within its hollow core were placed the plans for all the engines of war then known to man. The entrance was sealed with the most indestructible shield of force and metal that ingenuity could devise.

A chamber of equal size, decorated lavishly with pictorial representations of the horrors of war and the benefits of peace, was thrown open to the public for a period of ten years. Upon the expiration of that decade this also was closed by an immense portal of chrome-steel and the means of entrance given into the hands of New York's governing body.

After the completion of the tremendous structure which required nearly five years, three decades of peace had followed. Deprived even of the wherewithal to carry on warfare and engrossed in an unprecedented revival of science and the arts, man began to forget the desire for conflict which had absorbed his energies for many thousand years.

During this golden period government became a matter of intelligence and capability rather than of political cunning. Poverty, disease and insanity were almost completely eradicated. Art, literature, science, became the chief interests of all. Man was coming into his own.

Wentworth, a half mile above New York, suddenly felt a quiver of emotion stirring every muscle of his body. Something was happening to the Peace Tower!

Around its shining brilliant spire a pall of darkness was swiftly gathering, spreading downward, devouring remorselessly the apparently invincible solidity of the monstrous edifice.

Suddenly, where a moment before had been a gigantic, sky-reaching structure, was now but a half-defined swiftly-vanishing shadow.

Wentworth waited no longer. Springing into swift flight he winged his way above the city toward his own apartments. But as he went he looked down upon the milling awestruck myriads below with a preoccupied gaze that partook of something of their own awe. Even now he had difficulty in believing that the wonder he had seen did not contain elements of the supernatural.

But in seven days all the world should know the truth—and believe, with such evidence before it. He must have patience.

With the beginning of the Week of the Darkening Alvin Wentworth entered upon the most terrible period of his existence. For it was at this time that he began to have visions. They came to him at night, after he had retired. At first they were vague, shapeless, of brief duration.

Those he was able to banish. But with the coming of the third night they were stronger, plainer and longer. They stayed with him.

He had dozed off in the drowsy warm darkness of his room—and suddenly started awake with sweat beads on his clammy forehead. The long shadows in the dark corners of the room had become cold, menacing, sentient.

They would creep up to his bed from those dark corners and lay soft repulsive dark fingers on his skin. And they would whisper. . . .

That was what bothered him most—the whispers. They were something you couldn't fight. And you had to stay awake or the fingers would come sliding around your throat.

On the fourth night he sensed a change. The Shadows were gloating, triumphant over some evil of which he was ignorant. He knew it had to be evil though. The Shadows were all evil.

Except two—these were never strong but always he knew they were there, helping him, fighting with him, trying to tell him something.

He could never quite get it. They would whisper and he would lean forward, strain his ears for the soft hissing sound.

And always the Evil Shadows would rush forward, drown it out with evil whispers, push the Two back into the dark corners.

After a long time—(on the sixth night)—he could see another Shadow, other than those with which he was familiar. This was vast, unmoving—the huge shadow of a Machine.

When he saw that, the Two grew more desperate than ever. They would rush toward him with a terrible force, almost break through the crowding Evil—and toward morning they managed to reach him for a single instant.

The whisper came to him—"Tomorrow!" And in the middle of it he felt light on his face and knew that the Shadows were gone. It was day.

ON the morning of the Seventh Day, Wentworth sat alone in his private chambers. He had given orders that he was not to be disturbed.

He was trembling. At intervals he rose nervously, went to the landing stage outside his window, gazed out upon the vast open space in the heart of the city that marked the location of the vanished Peace Tower.

He stood on the balcony. He glanced at his watch. In five minutes it would be noon. Hend and Rall would reverse the switches that held the great tower invisible.

He tried to shake off the growing fear that obsessed him. He gripped the railing of the balcony. It would not be long, not long!

And suddenly he was gripped by cold terror. A vague shadow had come suddenly into the sunlight, was growing, thickening before his dazed eyes into —darkness.

The air was a shimmering blackness before him, the white stone of the balcony had turned suddenly to jet black. The whole city was plunged abruptly into a strained menacing shadow.

He was stunned, paralyzed. But only for an instant. With a grim effort he roused himself from his lethargy. He hurled himself across the room, regardless of the confusing darkness. He went rapidly down the hall to his Communication Room.

A little sob of relief came from his throat. The television was unharmed. The three-foot screen that reared itself from a clustered mass of apparatus gave forth the quiet hum that indicated all was well. It glowed dimly in the darkness about it.

His fumbling fingers found the directional dial. He spun it feverishly. The hum became a whine, a shrill scream. The glow illumined the whole room.

And suddenly Wentworth gasped. Fascinated, he stared at the Thing fast becoming visible on the screen. Instinctively, he knew it was not of human construction. And yet there was something familiar about it, a characteristic possessed by something he had seen before.

It was monstrous, vague, menacing—blacker than the darkness that surrounded it. It was possessed of a slimy repulsiveness that nauseated—yet there was about it, for him, an indescribable fascination.

With cold finality he knew—he had seen its shadow.

Wentworth was suddenly conscious of pain. His whole body was wracked with excruciating torture as though each atom that composed it contended against itself. The walls of the room were wavering strangely. The television screen was going black.

He was conscious of crawling painfully toward the balcony. His bursting lungs cried out for air. His last impression was of a sudden cataclysmic wrench that shook the universe. He passed into oblivion. . . .

* * *

Wentworth raised his head, groaned. He gazed about him in a dazed manner.

It was dusk. The fading sun sent long shadows over the little balcony on which he lay. The cool quiet of approaching evening enveloped him.

The world seemed bathed in healing silence. And so, content, he lay unmoving for a time, gazing up with vagrant fancies at the twining colors of the heavens.

Memory returned to him like a blow. He sat up at once, pain forgotten in his emotion. He crawled laboriously to the edge of the little platform, looked out over the city. How long had he lain thus? What events might have passed over his unconscious head!

He passed a hand unbelievingly before his eyes. New York had subtly changed! The human city that he had known seemed gone. Beneath him stretched a succession of grotesque distorted towers, holding within them an odd suggestion of darkness, of fantasy.

But suddenly far below him something stirred. A single tiny speck in human form winged its way uncertainly between the fantastic spires. Presently there were others, growing with increasing speed into a vast swarm.

New York was awakening! But curiously the knowledge left him with little interest. He was discerning a familiar aspect about the nearer towers. Then he knew!

They were still the old well-remembered towers that he had known before —before the visit. Remembering a certain paperweight upon his desk the cause of their distortion was plain to him.

The Monster had failed. But it had left its mark upon the city. With a sudden shudder he realized how close his myriads had been to the brink. The thought that followed close upon realization left him white and shaking. The Invaders would return!

He pulled himself erect. He forced himself to walk and found that he had no broken bones.

THEN he saw the cylinder. It lay, a battered little tube of twisted metal, close to the edge of the balcony.

A sudden suspicion cut his heart. There were only two men in existence who would attempt to communicate with him in that manner.

He stooped, picked it up. Holding it in shaking hands, he made his way inside, sat down at his desk.

He pulled his radiophone to him. Unexpectedly it was still in working order. "Give me Washington."

A long silence, broken by a crackling discordance of protest from the phone. Then, "Washington speaking."

And swiftly, at the sound of his voice, "Chairman! Thank God! We thought you were dead. The entrance to your building has been blocked with debris for three days. The President—"

Wentworth cut in shortly, "What's happened since It hit here?"

Hesitation. At last, "We don't know. Boston's been dark two days and Buffalo—"

"Bad?" ..

"Yes. It hasn't been seen since, so we have hopes—there was a rather bad storm last night. . . ."

The voice was unconvincing. Wentworth said, "Call me if you get anything new. I'll be here!"

"But—"

He cut the connection. He put his head in his hands for a long time. At last, a look of determination on his face, he placed the battered little cylinder into the translator.

There was crackling discordance. And finally, strained, unnatural, came the voice of a man—a familiar voice—Rall's!

"To whosoever shall find this—immediately on discovery carry to the offices of Alvin Wentworth, Chairman of New York City-State. The remainder of this message is translatable only by the means which he alone possesses."

There was a whirring click. Then, "Chairman Wentworth, I have not much time in which to say all that I wish, for at any moment we may be detected in the act of recording this, by Those who are our Captors. So I will be brief.

"In the first place I, John Rall, wish to state that upon me alone rests the blame for the fate which will soon be upon the world. It was I who, heedless of the warnings of one infinitely wiser than myself, insisted on continuing our ill-fated experiments with a power inconceivably too great for the tamperings of man.

"The result we know only too well—for us imprisonment and later unimaginable death. For the world—destruction.

"My friend, Arnold Hend, was unhappily justified in his fear that the gigantic Light Bender which we constructed in the interior of the Peace Tower would warp the matter that came into its scope as well as the light.

"When we rendered the Tower invisible we unknowingingly translated it into another dimensional plane. It was not long before we came in contact with the Inhabitants of that plane. Within twenty-four hours we were in their hands.

"There is no word in our language to describe those who are our captors, nothing in our experience with which to compare them. They are simply monsters.

"But their intelligence is gigantic. They had no difficulty in grasping the principle of the Light Bender or in accepting the fact of the existence of another World-Plane. And they have determined, by the use of our Light Bender, to invade our world.

"They build with inconceivable rapidity. For days they have been engrossed with the building of the Machine by which they hope to translate New York and later others of our cities into their own plane, where they will have them at their mercy. And they are ignorant of the meaning of Mercy.

"Their Machine is nearly finished despite the immensity of its size and the complexity of its equipment. And apparently with a species of sadistic humor they plan to drag New York under on the very same day that we had planned again to make visible the Tower.

"For several nights we have attempted to communicate with you, Councillor. At first we thought that perhaps some Engine of Man could avail against them. And we have nearly been successful, for in some places the Wall between the Worlds has been worn very thin by their constant experiments with the Bender.

"But we have failed. To you, what conceivable meaning could the strange antics of Shadows hold? None. And we have given up all thought that anything mere Man could do would have any effect upon the balance. There remains to us only one slight hope. That hope lies in the incalculable power of the Light Bender.

"It is our belief that if on any occasion the full force of the Bender is used by the monsters in maintaining their position in our dimension—or if the power is held on for any appreciable length of the time—not only will the atoms of their Machine be warped but they will be completely disrupted from their orbits!

"In such a case we realize that both of us are doomed to an inconceivable death. But even that will scarcely make reparation for the unspeakable horror which we have loosed upon the world."

The message came to an abrupt end. Evidently it had been interrupted.

Wentworth sat motionless for a long time. A silence settled over the room.

IT was dark when he took the battered little cylinder into his hand and went with it to the small round door of a wall safe.

He opened the door. With a careful motion he slid the cylinder gently into the wall. Then he took up the radiophone. "Washington. . . . Any news?"

The answer came faintly back over the ether: "None."

He prepared himself for a long period of waiting. He took the little phone into his bedroom and set it on a small table beside his bed. He arranged the automatic alarm. At last, with a weariness born of mental and physical exhaustion, he threw himself upon the bed.

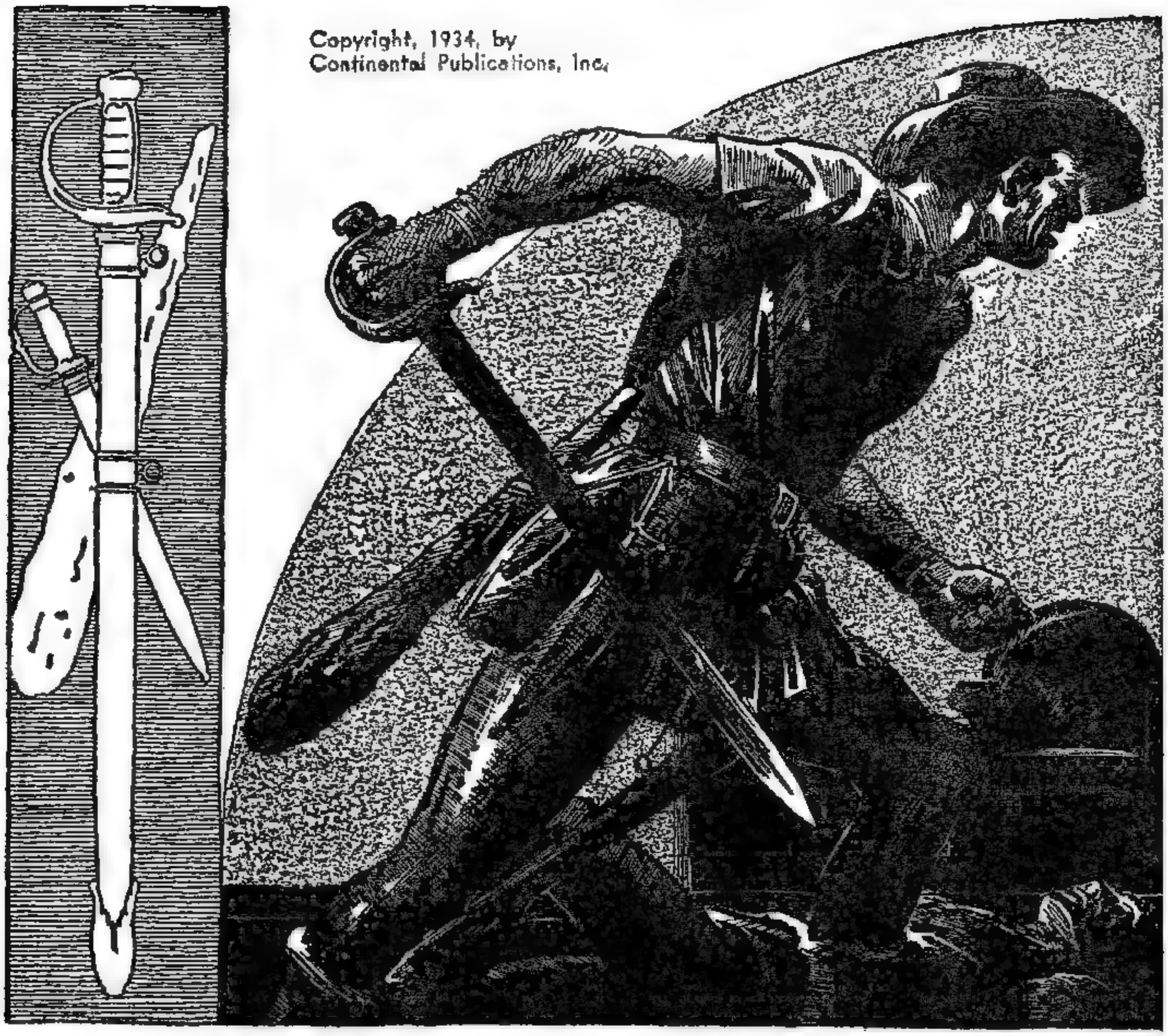
He waited many days in vain. And after a time the rescuers broke through crumpled metal that had yielded to the Bender and he went back once more to the world of men.

He was destined to wait a long time.

The days and the months swung past and grew into years and still there was no news. That is, if one excepted the whispered story of a German tramp steamer in mid-Atlantic that had come upon, at dawn of the day following the last visit, a vast section of boiling sea in which seemed sinking a gigantic dark mass.

(Concluded on page 161)

Copyright, 1934, by
Continental Publications, Inc.



THE LAST PLANET

CHAPTER I

Last Refuge

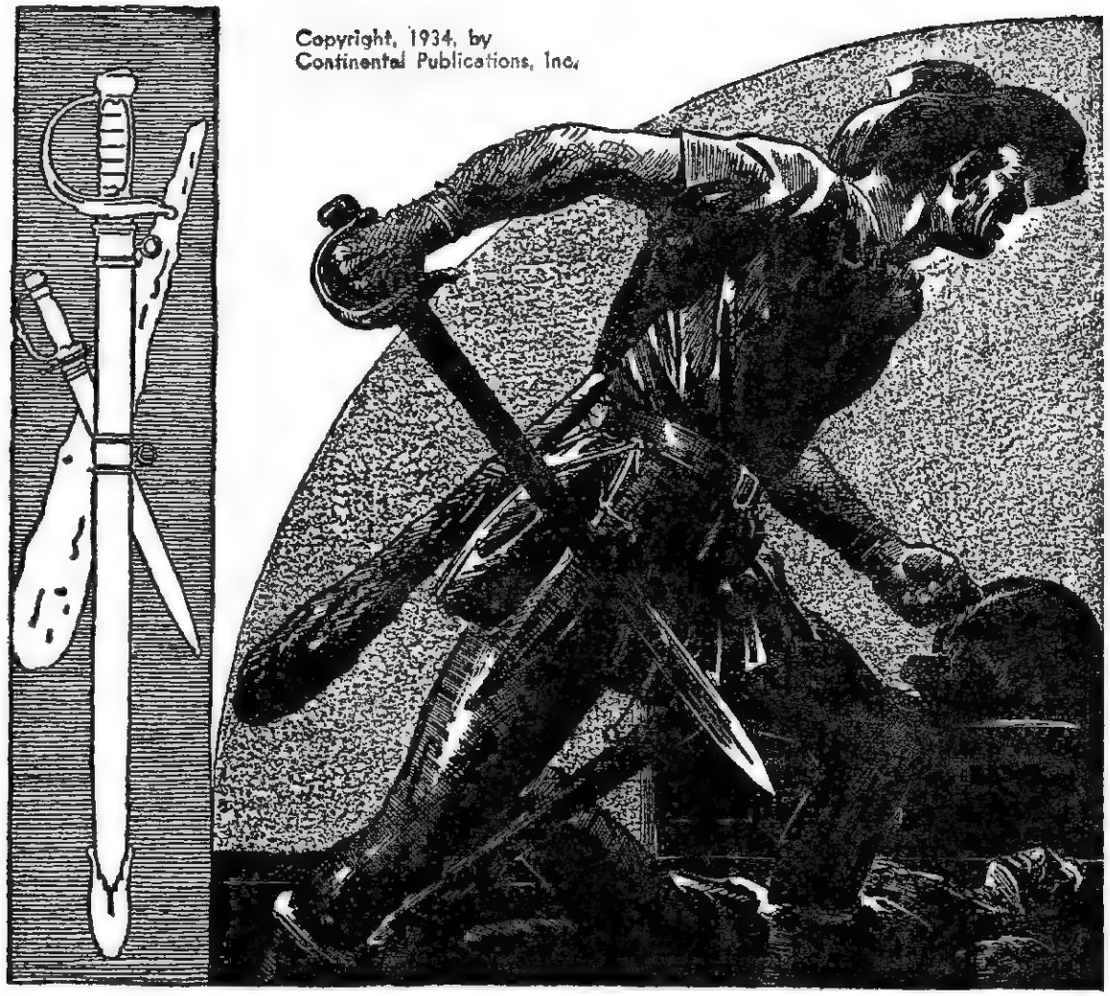
FROM his vantage point on the roof of the Mercurian university administration building Jay Val looked uneasily over the high stone walls at the dark threatening city of Sandos, planetary capital of Mercury. It was the last refuge of the human race, once proud masters of the entire Solar System.

That had been over a million years ago.

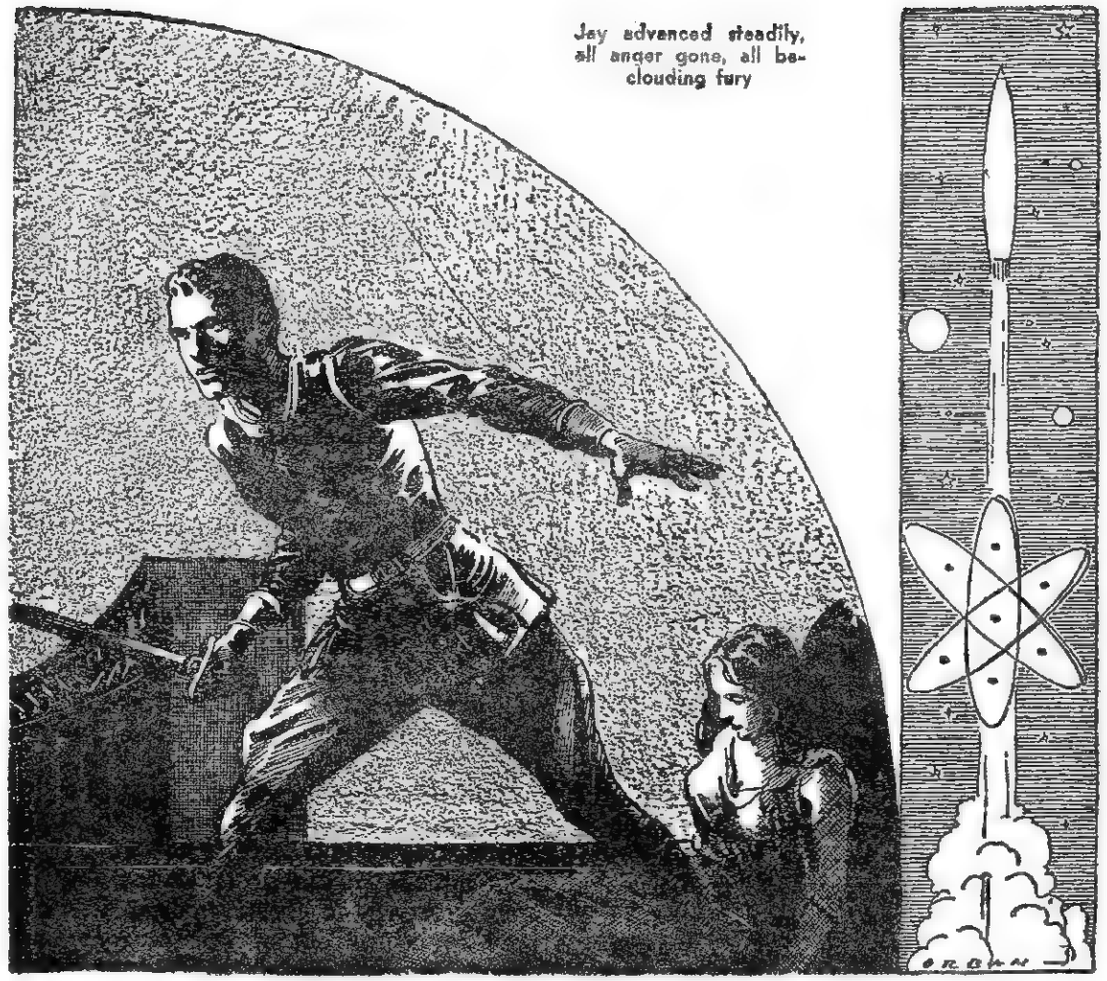
Long since had all of the other planets been abandoned to cold and darkness and a few hundred thousand survivors now lived on Mercury, huddled as close as possible to the blackened ruin of the Sun.

With the solar system doomed, they who alone can

Copyright, 1934, by
Continental Publications, Inc.



THE LAST PLANET



Jay advanced steadily, all anger gone, all beclouding fury

a complete novelet by R. F. STARZL

CHAPTER I

Last Refuge

FROM his vantage point on the roof of the Mercurian university administration building Jay Val looked uneasily over the high stone walls at the dark threatening city of Sandos, planetary capital of Mercury. It was the last refuge of the human race, once proud masters of the entire Solar System.

That had been over a million years ago.

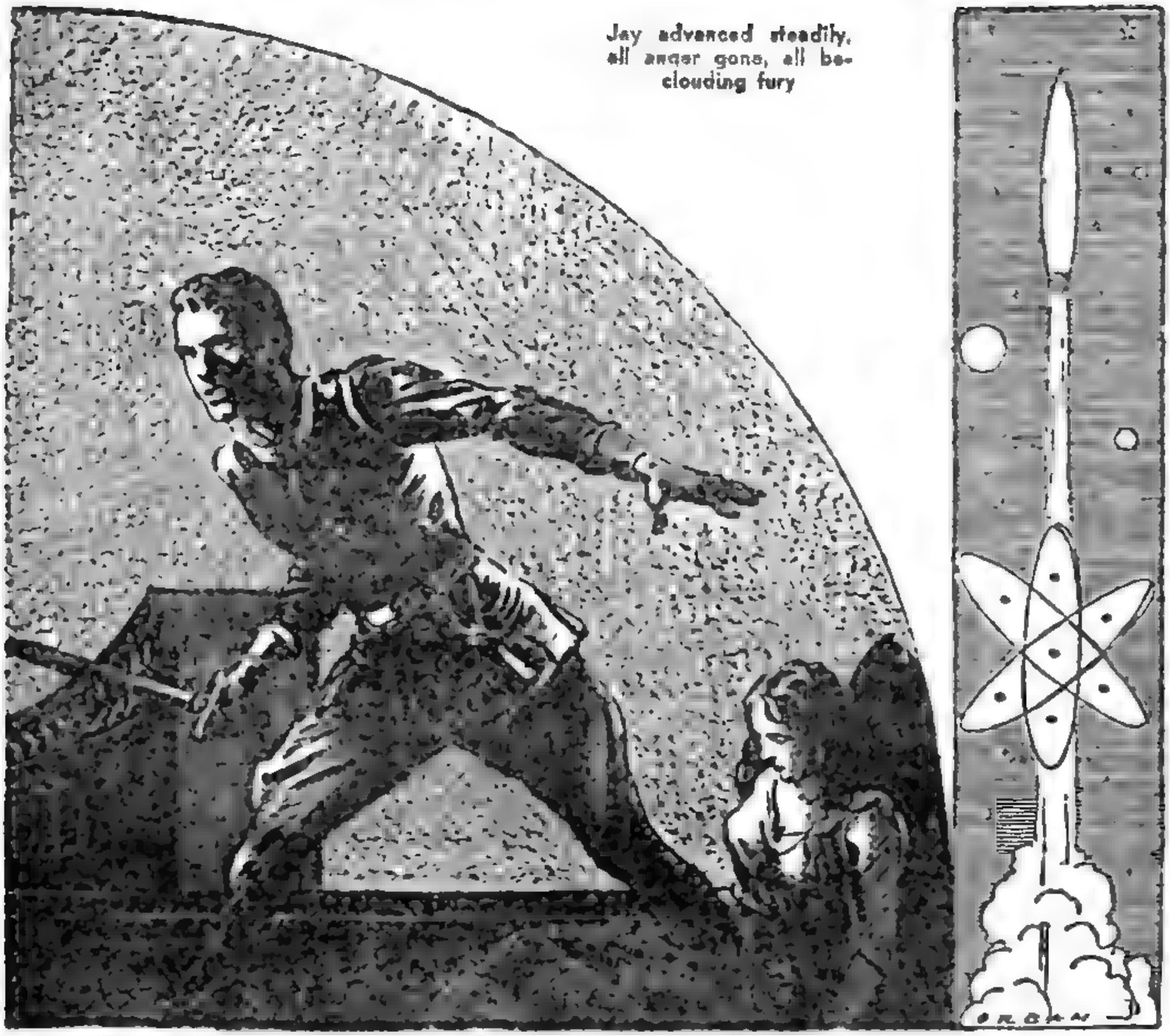
Long since had all of the other planets been abandoned to cold and darkness and a few hundred thousand survivors now lived on Mercury, huddled as close as possible to the blackened ruin of the Sun.

That light and life-giving star was almost a cinder though it still radiated a little heat.

Jay Val looked up through the gigantic vitrine bowl that covered the entire group of university buildings. Tidal action had long ago stopped the little planet's axial rotation, so that now the sun seemed always to hang directly overhead at Sandos.

It was almost invisible in the velvet black firmament pricked by millions of stars, revealed more by reflected light on its own dense atmosphere than by infrequent dim ruddy lines that revealed a crack in the solidifying surface. The

With the solar system doomed, they who alone can save humanity must fight those they would rescue!



Jay advanced steadily, all anger gone, all beclouding fury

a complete novelet by R. F. STARZL

That light and life-giving star was almost a cinder though it still radiated a little heat.

Jay Val looked up through the gigantic vitrine bowl that covered the entire group of university buildings. Tidal action had long ago stopped the little planet's axial rotation, so that now the sun seemed always to hang directly overhead at Sandos.

It was almost invisible in the velvet black firmament pricked by millions of stars, revealed more by reflected light on its own dense atmosphere than by infrequent dim ruddy lines that revealed a crack in the solidifying surface. The

save humanity must fight those they would rescue!

Sun, in its old age, was nearing death, its seemingly inexhaustible energies almost expended. The prodigal destruction of its own substance had come to the inevitable end and in its ruin it was involving a dependent family of planets.

The young man, usually so sanguine, could not escape a feeling of melancholy as he contemplated the end of this star's glorious career. He did not at first notice the girl who had ascended to the roof and who now stood beside him, gazing over the parapet.

Even in the dim light it would have been obvious that they belonged to the specialized social order known as the "technics"—the technical experts, the brain workers, who had for centuries prolonged human life in the face of steadily growing natural hazards.

Both were slim, of medium stature, Jay a few inches taller. Both wore synthetite blouses, knee breeches, leggings. The man's hair was covered by a round skullcap of woven metal but the girl's hair was uncovered. It fitted her head like a burnished bronze shield, fastened low at the neck. Both were rather pallid —pigmentation was now unnecesary.

Jay suddenly became aware of the girl. *"Idar!"* he said softly. His voice was low, restrained. "I have been saying farewell to our sun. Though we must leave it it seems like deserting a faithful friend when he at last becomes old."

Idar smiled. "The old Sun was dying before you were born. Tell me, Jay, is there any sign of attack?"

"The city is quiet. Curtes and his Peacemakers seem to have established some kind of order. Idar, I don't like Curtes! That man is an anachronism, an unreliable treacherous savage! When I see him with his sword and knobbed club I almost believe one of our museum reconstructions has come to life."

"Nevertheless, Jay," said the girl with a trace of coquetry, "Curtes is not to be despised. He may be a savage—a throwback, as so many of the people have become since the sun failed—but he's a magnificent savage. None but he could control the crew of murderers we've hired to protect us."

THE young technie said nothing for the girl was right. Since the planning of the *Ventura* all catalyte, the potent agent required to activate ray tubes, atomic motors and space rocket disintegrators, had been segregated, making modern weapons, which all depended on catalyte, utterly useless.

A premium had thus been placed on brute strength and cunning—discounting the superior mental development of the specialized technie race. But it had been necessary to insure the success of the most colossal adventure in history. The *Ventura* would not be used merely to span interplanetary space—that was an old story—but the enormously greater distances of interstellar space.

Jay looked up at their objective. Out there, about a light year away, was a yellow star—Ridan. The electrotelescope had shown it to be one of those rare astronomical monstrosities—a sun with a family of planets. One of those planets had been spectroscopically explored and found to be capable of supporting human life.

The scientific resources of the entire race had been commandeered to build the *Ventura*. This enormous vessel was now housed in the great university inclosure, ready to crash through the vitrine dome and out of the solar system when Ridan should again be in the proper relative position.

"Idar!" Jay said softly, moving closer to the girl. "You are old enough now to take a mate. I love you, Idar. Come to me! It may take ten years for the *Ventura* to reach Ridan, to settle on New Earth. How much faster the time would pass if you were my wife!"

The girl let him take her hand but did not yield further.

"I like you," she confessed, "but you lack something, Jay. I think I must be a reversion to the primitive too. I wish you were more like—like—Curtes! He" —she groped for an unfamiliar word— "he thrills me! His strength—his destructiveness!"

Jay did not show his hurt. He asked whimsically, "And am I lacking all manly attraction?"

"No, Jay. You know I don't mean that. Didn't I see you win the p r i z e for swordsmanship over all the technies? And no one is more skilled with the quarterstaff. But—don't you see—mere games! You risked nothing but a prize! You have never killed anyone in battle! I can't help it, Jay! It sounds barbarous but—"

"I see," Jay said quietly. At this moment they were interrupted by a welcomed diversion.

A man was climbing up the narrow winding stairway, p r e c e d e d by the clumping of clumsy feet. Arriving on the roof he advanced to the two standing at the parapet. A tiny absorption flash in Idar's hand illuminated him brightly.

"Kiro!" the girl exclaimed. "And have you saved us again?" she added with gentle sarcasm.

Kiro was a gigantic "mug"—as the peasant race had come to be called. His shambling gait and ungainly motions, as well as his great size, made him vaguely reminiscent of an emaciated good-natured bear. His red face was wreathed in adoring smiles for Idar and his round innocent eyes blinked at the light. He swallowed before speaking.

"Lucky you are to have me, little Idar! But for me the mob would have attacked Curtes and his cutthroats just now. But when they saw me they kept their distance! If Curtes wasn't jealous of me he would make me one of his captains."

He threw out his great chest so that the frogs of his tunic strained against the fabric.

"What a braggart you are, Kiro!" Idar chided. "Yet I would hate to dispute the way with you if I were a man!"

"Indeed it were foolish—sheer suicide!" the giant asserted earnestly. "See this sword?" He pulled the enormously heavy blade from its scabbard, feinted and split an imaginary enemy from crown to pelvis. "Is it not neatly done, Mister Val?"

"It would finish him," Jay conceded drily, "if he didn't step aside and slice off your head."

"Too long have I swung a shovel, Mister Val. The sword is my tool henceforth and forever. If Curtes himself—"

At that moment another man was heard coming up and Idar flashed her light on the stairhead.

"Curtes!" she exclaimed.

HE was eye-filling, this magnificent swashbuckling rascal. Over six feet tall, dressed in a blue tunic and shorts that revealed muscular legs, ruddy now with the sting of the frost outside the campus inclosure. At his belt hung a formidable club—beside it the scabbard holding a short broad sword. He swept a broad-brimmed hat of soft metallic weave from his head, releasing a cascade of dark curly hair.

"My reward!" he declared, his voice vibrant, powerful. "A dull round among these stupid cowardly cattle—then all is compensated when I greet the most beautiful woman in the Solar System—or what's left of it!"

A slow flush mounted to Idar's pallid face. Jay watched, saw in the reflected light of her flash and recognized her emotions. So did Curtes but the fighting man was too wise in the ways of women to press his advantage.

"There is little danger from the mob, Mister Val," he reported. "They mill about and threaten but when we come they melt away."

"The fools!" Jay exclaimed sadly. "It is more for their sake than for ours that we built the *Ventura*. We could survive for many centuries on Mercury—they could not. We will transport them all to Ridan's new planet but they must wait till we have built a larger faster ship. The *Ventura* will hold only four hundred. All the technies must go—their work lies on New Earth. There are only fifty other places and—"

"And those," Curtes interrupted with a scornful laugh, "are reserved for the money masters—the lawgivers!"

"They'll be a dead load," Jay admitted. "Evolution added nothing but acquisitiveness to their race. But we have agreed to take them."

"You should take me," Kiro intruded, "to protect you!"

"What!" Curtes whirled, saw his henchman for the first time. "How dare you come up here?" he roared. The short sword leaped out. Kiro saw it, fear of death in his eyes. He tugged at his own weapon, whirled it at his commander's head.

But Curtes deflected the blade upward and with a snap of his steel-spring wrist brought the flat of his blade against the side of the giant's head. Kiro fell, stunned, but after a moment managed to get up and stagger away. Curtes laughed.

"Neatly disposed," Jay remarked. "But if that clown had thrust, instead of swung you could hardly have unsheathed your blade in time."

For the first time the animosity between these dissimilar men came to the surface.

"Swords are swords, and test tubes are not swords!" Curtes said with poorly concealed anger. "I appreciate your suggestion, Mister Val. Would you like to make a test with actual blades?"

"I have no time for brawling," Jay replied coldly. "Tomorrow is the day for the launching. I confess—strangely—that I would be pleased to take you to the armory and teach you scientific swordsmanship but—"

"I understand," Curtes declared ironically, "but no useful purpose would be served. Spoken like a technie!" He took Idar's arm and led her a few steps to the parapet.

"Have you no words for one whose thoughts will f o l l o w you through space?"

Idar strangled a sob. Then she faced Curtes squarely, her eyes misty and mysterious in the faint light from the brooding city.

"I will not report this affair to the manager," she said firmly, "but you must go now. You are interfering with important work."

Curtes gave her a long look, his handsome reckless face frozen. "I am going—now."

When she was alone with Jay, Idar declared tragically, "There! When he challenged you why didn't you meet him in the armory? I could have loved you for it!"

"But for what reason? Curtes is strong—he is reckless. I might have been compelled to kill him and we need his services!"

Idar's answer was to burst into tears and she went below. Jay, looking after her, whistled softly. "I wonder," he murmured. "Does she think I was *afraid?*"

But his own problems and perplexities were soon to be driven out of his mind by the threat of disaster that imperiled the human race's last chance of survival.

CHAPTER II

The Revolt of the Technies

JAY'S work in preparation for the abandonment was done. He was one of the engineers who had designed and built the electronic motors, the largest ever known, which were to propel the *Ventura*. Thus he had leisure to observe the busy preparations for the voyage.

Climbing down from the tower he found the inclosure swarming with activity. Long actinic lights bathed everything in their glare, revealing the pleasing green of grass, shrubbery and other plant life, still artificially preserved and sheltered here.

Countless metal cylinders, filled with concentrated foods, fabrics, raw and manufactured materials of all kinds, were being hauled by silent electric trucks in a never-ending stream over the loading planks of the great vessel whose smooth metal sides towered aloft to be lost in comparative shadows. Those of the university buildings that had windows were ablaze at every opening. Through the myriad stimulating sounds filtered the excited hum of many voices, nervous laughter.

Jay made the rounds of all the barred gates. At each two Peacemakers stood, sword and club hanging carelessly at belt, gazing indolently over the busy scene. Outside the mobs might be form-

ing and dispersing—these professional fighting men were unmoved. Watching them, Jay felt a certain admiration for these men who lived by the sword, crude and inept as he considered them when judged by the fine scientific accuracy of technie fencing technique.

Presently, he heard his code number called over the annunciators and he hurried to the office of the manager, the head technie who had been the president of the university—who was now the official in charge of the manifold activities of the abandonment.

Manager Elson sat behind his desk in the clean-cut sparsely-furnished cubicle he used for an office. His thin patrician features were drawn with fatigue. He was over sixty years old then and his responsibility weighed heavily upon him.

"Val," he said without preliminaries, "we are having trouble with the financial-legal clique. They want us to give up all reservations, taking only the technies needed to man the ship."

Jay smiled contemptuously. "To make room for still more of the parasites?"

"Yes," Elson said wearily. "We made a mistake when we admitted that the trip could be made with fair safety. At first they were willing enough for us to make the experimental trip alone."

"And what answer did you give them?"

"I asked for a little time. I want you to project yourself with me."

He rose and led the way to a little door, which opened into a large room fitted out as a laboratory. In one corner was a square booth with photoelectric cells spaced about three feet apart. It was a well-known device—the telestereo—which permitted the transmission of apparently solid bodies. An optical and auditory illusion—the bodies would not leave the transmitting booth.

"The Master Capital board is now in session," Elson remarked as he selected a numbered button. "I will rely on your judgment when you have heard them."

With the click of the button the technies seemed to be instantaneously transported to a long luxuriously-furnished room. Looking down at where his own feet would be Jay saw merely the deep-piled rug on the floor. But he knew that to the dozen or so men who sat at the massive gleaming table they were solid-appearing images. Elson too was invisible to Jay but he could hear the old man's voice.

A dozen pairs of eyes focused on them and Jay steadily returned the regard of these beings of the Master Palace, who were hardly ever seen by either technies or the common races. Here were the representatives of a small group of wealthy people who had at one time owned the entire Solar System, only to lose it, a planet at a time, to the steadily encroaching cold of outer space.

Now a few hundred of them lived in a massive concrete and beryllium palace on a slight elevation in the middle of Sandos. Their stronghold had no windows—no way of access except through thick metal plugs like the doors of a treasure vault. Here they lived, warm and safe from the harshness of climate and the attacks of a despoiled citizenry.

Yet, as Jay looked at them, he thought he detected an air of uneasiness beneath their autocratic domineering bearing. He realized with something like a shock that these masters of the last inhabitable planet were afraid to let the technies go away and leave them alone.

AS the technies appeared a scantily clad beauty rose from the chair arm on which she had been sitting and swept regally into an adjoining chamber. An individual who was obviously the chairman rose and faced the images of the technies.

He was rather below medium height, generously padded with solid fat, bald of head, with cold gray eyes. He held a pair of bow-framed glasses between thumb and forefinger and as he prepared to speak he adjusted them on his nose. His long loose gray garment proclaimed him a director of the legislative-judicial committee.

"We have summoned you," he began austerely, "to inform you of a decision that will compel a change in your plans.

Our stockholders have decided that they will make the first trip to Ridan's new planet."

All of the well-fed predatory faces leaned forward to note the technies' reactions.

"Who," Elson retorted, "will man the ship?"

"By your own report," the chairman returned, "it will take only fifty men to run the ship. That leaves three hundred and fifty passenger spaces. There are a few more of us but we can put up with discomforts if need be."

His colleagues nodded approvingly.

"You realize," Elson asked coldly, "that this means marooning the rest of the human race? Fifty technies, arrived on the new planet, could not build a new city with homes and factories and build machinery for mining a new supply of catalyte.

"That means we could never return to Mercury to take off the other technies and the half million people still living in this unhappy city. Nor could those remaining here do anything for themselves —for we will be taking the entire remaining supply of catalyte."

The directors gave bland imitations of distress. Inherited traits made a few of them conciliatory.

"How do you expect to support yourselves?" Jay put in, brutally driving at their selfishness. "Much must be done to make you comfortable."

"Our report," one of the directors declared smugly, "is to the effect that the equatorial climate is very mild—much as it was on Earth at the beginning of the Atomic Age—around two thousand A. D."

Jay struggled with the unfamiliar emotion of anger—unfamiliar, because he had lived a life of cloistered scientific abstraction. The new emotion was heady, robbed him of the faculty for faultless thinking, but it exhilarated him.

"And what," he asked loudly in such a harsh voice that it sounded strange in his own ears, "of the thousands of human beings out there?" He swept his arm to indicate the surrounding city, the cold, dark, cheerless city of Sandos. "What about them?"

"Oh," drawled a lean, hawk-faced financier with deep-set, smoldering eyes, and rabbit teeth, "to the devil with those people!"

"And I say"— Elson was angry too— "to the devil with you!"

Consternation, unbelief, sheer wonder, froze the council of masters. There was a moment's silence, broken by audible gasps. Then voices clamored for recognition.

"*Silence!*" The chairman's smooth, fat face was mottled.

"You forget," he roared, "that we furnished the credits for building the *Ventura*. We now elect to exercise our option calling for immediate payment— two billion units! We'll have a bailiff with an attachment out in fifteen minutes!"

Gone was the smugness, the sense of security. Jay realized with a deep sense of pride that only the technie, Elson, was still master of himself. He thrilled to the stern precise timbre of his voice as a lull in the conversation permitted the manager to speak.

"It had to come. I'm glad it came now. Long have we realized the undesirability of taking any of you into the new world. Parasites! But we were bound by this agreement. Now you have broken that. It is a war! And none of you shall ever leave Mercury!"

One of the directors jerked open a drawer, snatched out a beautifully ornamented ray-tube. Jay realized with horror that the masters had not obeyed their own government edict. They had neglected to turn in their weapons containing a supply of the precious catalyte. The master swung the slender tube toward the technies and from its muzzle leaped a fanned violet flame.

"Undank, you fool!" shouted the chairman, striking the weapon down. "Do you realize it's a telestereo?"

Jay heard Manager Elson laugh softly and in the next instant the hall of wealth faded out and they were again back in the university laboratory.

But the manager's amusement quickly

faded. "We were foolhardy," he said soberly. "It would have been wiser to temporize. They will not even bother with legal subterfuge now. And with their modern weapons they will have a tremendous advantage."

"We can withdraw catalyte from our storage cartridges, enough to put a few tubes of our own into commission."

"Can't spare it. We need every grain."

"If they arm the government guards we shall be unable to resist them."

"I doubt that they have catalyte enough. Probably they reserved only a few tubes—the hoarding instinct at work. But the bulk of their supply has been turned in. Selfish reasons made them wish for the success of the *Ventura*."

WHEN they again stepped upon the campus under the vaulted vitrine dome they learned that the Peacemakers had just repulsed another attack by the hungry mobs that forever prowled the streets.

Some hint of the clash between the technies and the legal-financial group had leaked out and these hopeless people had flung away their lives cheaply in the hope that, in some way, some of them might win immediate passage to the new planet. The stalwart Peacemakers at the gates were wiping red stains from their swords.

Jay and Elson approached the nearest of these.

"What happened out there just now?"

The man grinned, crossing hairy arms. "A bailiff from the masters' court, Mister Elson—perhaps with a writ for one of our stout crew. We have small love for bailiffs and we heard of your little affair with them. So we threw this one out. It pleased the mob to pull him into several little pieces," he concluded with an amused grin.

"Where is Curtes?" Jay asked.

"He is outside with a handful of men. The mob was breaking down the warehouses across the street, trying to build a tower to get over the wall."

"Open the door for us. We wish to see."

The soldier complied indifferently, and the technies stepped into the thin outer cold. The temperature was well below zero but the human race had adapted itself to low temperatures. Outside the wall the light was relatively weak. A few vacuum tubes at long intervals threw ragged shadows along the rough walls. The Peacemakers had cleared the streets of rioters and were now standing about indolently.

A few minutes later a sullen red glare bloomed somewhere over the tops of the ugly angular houses. The Peacemakers watched this, at first with little interest, then with feverish intentness.

As they listened there came to them a sullen, murmuring sound like the leaden beat of waves on an ice-crusted shore of Venus, and there became apparent a drift of people toward the fire. There were no aircraft, due to the lack of power, but from the nearer streets and alleys came the clatter of running feet.

The red glare rose still higher and a man's shout broke the spell. "The Treasury is burning!"

Loot! Loot! The city responded to the lure with mad, primitive abandon. None paused to consider that treasure would soon be utterly worthless on moribund Mercury.

"Look!" Jay snapped. "The Peacemakers are deserting! Curtes, this is a ruse!"

But Curtes himself was running past, his waving sword overhead. He was laughing, as mad as the rest.

"The masters have done this!" Elson groaned. "They have fired the Treasury, knowing what these fools would do."

They found the gates ajar. The inside watchmen too had caught the contagion.

"They'll be coming soon. Will you warn our people, Mister Elson? I'll get a few of our best gymnasium men to watch these gates. It'll be five hours before Ridan is in the right position for our placement. Could we risk a flight now?"

"Too dangerous. It will be safer to fight."

To fight—Jay smiled bleakly as he made his way to the armory. He selected

a short keen blade of manganese beryllium alloy. His friends were selecting weapons, balancing lithe well-knit but rather slender bodies as they rehearsed the scientifically correct positions in engagement, parry and lunge.

They showed no excitement, going about their business methodically as though they were about to enter a class contest. But this time, Jay thought grimly, the object was not a demonstration of skill but the dealing of death! He tried to picture the fight in the street that was soon to follow.

His breath quickened. He realized with a wry inward grin that he was becoming more like Curtes! At that moment he saw Idar standing among a group of girls in the armory doorway. Her eyes sought his and he saluted gaily.

"Watch me, Idar. Soon you will see me kill a man, perhaps many!"

She came to him quickly, said breathlessly, "Be careful! Oh, I wish I hadn't said what I did! It was silly, romantic. I can't let you risk yourself!"

"You forget, Idar," Jay said quietly, concealing a surge of happiness, "I am the best swordsman in the university. And Curtes has deserted."

Her fingers, deceptively slender and strong, gripped his hand. "Kiss me before you go!"

He kissed her there amid scores of others. But they were hardly noticed. The place had become thronged with girls. Faced for the first time with imminent personal danger, a million years of emotional control slipped away.

But the sweetness and wonder of it was cut short. A cry reverberated down the corridors. "The assault has begun!"

CHAPTER III

Curtes' Prisoner

AND so the cold-blackened Sun witnessed a spectacle that harked back to its youth. At the apex of slow-growing civilization, the culmination of aeons of material and scientific advancement, men were again fighting with weapons little better than the crude spears of primitive savages.

Strange and deadly weapons had the world known. Bows and arrows had supplanted swords, which had in turn been replaced by guns firing chemically-propelled leaden pellets. And these in turn had gone into oblivion before the immensely more deadly ray weapons. And these, to complete the cycle, were useless without catalyte.

So men trained in the transcendent sciences issued out of the gates, carrying blades with which to hack other men's bodies. Over it all the glow of the burning Treasury streamed silently, the funeral pyre of a dying civilization.

The palace guards, large turbulent men, came on methodically. They wore armor of small flexible overlapping plates with conical helmets that had protective extensions over the backs of their necks. They carried long heavy swords with which they were wont to drive through all opposition, all defensive armor.

The technies, with no protection whatever except the blades with which they parried blows with nice precision, proved unexpectedly stern opposition. Occasionally a hurtling sword would strike down through such a defense, stretch a slender pallid body on the ground to be trampled in blood and dust.

But the skill, the fine coordination of the technies, began to tell. Again and again their fine blades struck home through tiny crevices in armor, inflicting slight cuts so shrewdly placed as fatally to slash veins and arteries.

Both sides went into the battle silently but as the soldiers saw that easy victory was to be denied them they came on with redoubled fury. At the same time reinforcements came on the run. With a pang Jay saw another of his companions go down.

"Quick! Fling this into the middle of them!" Elson, trembling with excitement, was holding out a metal cylinder four inches in diameter and eight inches long.

"A chemical bomb. Throw it among the soldiers."

"But it will level the whole city!"

"Throw it, I tell you! This is not an atomic bomb. It's a relatively harmless one—the kind used by primitive people. I used up our entire supply of medical nitroglycerine to make it. Throw, I say!"

Jay took the cylinder gingerly, hope tempered by doubt. He carried it outside the gate, where he saw that the technies were in desperate straits. He hurled the bomb into the thick of the attackers, who were massing for the final rush. As the cylinder lobbed through the air, he shouted, "Down, technies, *down!* For your lives!" Then it seemed as if the world had exploded and blackness flooded out all life for Jay Val.

FOR what seemed long hours he struggled toward consciousness. When at last his eyes opened and he was able to look around he had a blinding headache and it took some effort to realize that he was lying on a cot in a small bare room. A light tube that was only faintly emanating lighted the room dimly.

Jay sat up painfully and as he did so saw the gigantic Kiro squatting disconsolately before the locked door.

"Kiro—what happened?"

"I don't know exactly, Mister Val, except that when the Treasury burned, all of us rushed over there to get some of the loot. But it's all buried under the ruins," he added sadly.

"Yes, that was foolish, Kiro. While you were gone the palace guards attacked us. And they would have beaten us too if it hadn't been for a chemical bomb. Why am I in this room?"

"Well, Mister Val, you see, you're a prisoner!"

Jay's hand went to his side. His sword was gone. He staggered to his feet, burning with anger. "Somebody will pay for this! Move aside!"

But Kiro stood up, placing his big body before the door. "You must stay here, Mister Val. Curtes' order."

On his crude features was a strange intermingling of respect and determination. His hand rested nervously on the hilt of his heavy sword.

"But this is mutiny! What has happened to the other technies?"

"All are prisoners. When Curtes came back he drove off what was left of the guards. The technies suspected nothing. They were easily overcome."

"Where is Idar?"

A look of acute distress rewarded this question. "Curtes has her in the *Ventura*. He promised me he would not harm her."

Jay groaned. He had an impulse to throw himself upon this stupid giant, to kill him and search for the traitor. But instead he grappled for control of his dizzy brain, at last evolving calmness and a desperate plan.

"Kiro," he demanded, fixing him with the intensity of his glare, "do you approve of that? You admire Idar, don't you?"

"Yes," Kiro said simply. "I would die for her! But—"

"But," Jay went on relentlessly, "you let Curtes take her! You—the mighty fighter!"

"I can't help it," Kiro mumbled miserably. "I could kill three men like Curtes at one time but when he looks at me—"

"Never mind that!" Jay snapped. "Let me out of this. I'll take care of Curtes!"

But Kiro was stubborn.

"You worthless braggart! You miserable coward!" Jay heaped insults upon him, pleaded, but in vain. Without a weapon he would have no chance to overpower the guard. At last, disgusted, he threw himself down on the cot and feigned sleep. He estimated that only three hours remained before the ship must be launched, or it would be necessary to wait until Mercury had made another revolution around the sun.

The technie's active brain was not as supine as his body. As he lay there he pretended to rest and in a few moments approached Kiro again. But where he had been belligerent before he now seemed filled with discouragement.

"I can't rest," he declared despondently. "Have you any merclite?"

"Sure I have!" Kiro said, pleased to

Yet Prosser was throwing away a good gamble as if he had a sure thing on his hands. Any fool should know that a can opener attack can kill a straight screen defense in under two hours. It was a freshman tactical problem. And any three-star pilot should know that a burnt-out overdrive takes two hours to rewind and about an hour to re-align. It was an arithmetic problem, a grammar-school problem. Two hours minus three hours leaves minus one hour.

For men who would be dead at the beginning of that hell, it was as good as a millennium.

The Lyrans had seen the brief flickering of the *Hyperion* as the overdrive had been tested, and were bringing up new nutcrackers as fast as they could spin. The fixed glare of the visible sun outside was completely fogged out in electrical blue haze, and the screen generators were yelling in anguish. The smell of hot insulation was no illusion now—it crept into the turret on smoky tendrils.

And still no order to fire. It was already too late for effective fire. The turrets would have to rake blindly. But even that was better than maddening inaction.

The General Alarm again!

Was Prosser going to try to kick free on the jets? Didn't he know that the can openers had him pinned?

"All hands make fast. General Lights Out. Full drive on the screen," Prosser said. Then, astonishingly, he laughed. "This will make the last one look pretty sick."

The cubby darkened. Jane cut out her circuits, in complete despair. "This better be good," she muttered fiercely. "This just damn well better be good."

The ship's interior was blacked out now. The sunlight came through again, about half as bright as it had been in clear air, as the full-driven screens beat back the can openers. Did Prosser have another earthquake up his sleeve? Jane watched the horizon.

For a moment, nothing happened.

Then the entire horizon bucked and shot skyward.

The groaning of the rock-shoulders changed from a gentle straining noise to a howl of protest, to a bellow of outrage, to a terrible pounding waterfall that shook the ship despite the screens. It got louder. It got still louder. It hit *forte possible* and got louder still.

A tidal-wave of rocks fully forty miles high thundered down upon the *Hyperion*. With it came a fountaining shrapnel of chips, and a sable dustcloud.

Just before the whole planet threw itself in Jane's face, the dust blotted out the last thin streamer of sunlight.

SOMEBODY seemed to be kissing her. She punched instinctively, but the pressure had melted away. "I'll fix you, you—" she told the empty air. Kissed by an earthquake. It was entirely too much.

A moment later, she thought to open her eyes. She was sprawled on the deck of the bridge, one shoulder tipped up against a bulkhead. It couldn't have been Prosser who'd been kissing her. He was twenty feet away, bending over his everlasting charts. Still, there was something almost demure about his preoccupation.

She sat up, painfully, all indignation right down to her left and littlest toenail. "Prosser!" she said hoarsely. "You said no earthquakes! I'll mutiny! I'll—"

He turned and regarded her, mildly. If he was glad to see her awaken, he didn't show it. With that expression, he could have been sorry that she hadn't died and she still wouldn't have been able to guess it.

Nevertheless, not even impossible earthquakes have mustaches.

"Did we make it?"

"Yes. We're out and away—twenty light-years now. They never knew what hit them, to coin a phrase."

"I don't, either, blast it," she said. "Explain to me before I kill you."

"It's simple enough. Come over here." He waited until she had staggered to her feet by herself, as indifferent as ever to anything but his own rarefied universe. When she got to the chart table, he drew an egg on it.

"That's the orbit of the little star," he said. "And here was where we were." He put a pinpoint inside the little end of the egg. Then he drew a big circle around the pinpoint. "And that's the orbit of the paired-off stars, one on each side of the circle." He put them in.

"Yes?" she said dangerously.

"So here is the little star, coming around the small end of the egg at top speed," he said. "The big paired-off stars are whipping it around a pretty sharp turn, and bringing it very close to that rockpile of a planet we were on, here."

As the indolent quarrel went on Jay carefully pushed open the door a little, holding Kiro's cumbersome sword ready. The Peacemakers were squatting on the floor, their backs to him. One was tall and powerful, resembling Curtes in general appearance. The other was gross, unclean. The latter had one of the light technie swords stuck in his belt in addition to his own weapon.

Very quietly Jay pushed the door open. If he could reach the basement door, bolt it from the side—

It was not to be that easy. Some sixth sense warned the sober watchman. Jay saw his head turn—his eyes widen. Without hesitation, using both arms, Jay sent the great sword, point foremost, through his hairy throat.

With lightning-like rapidity the technie now jerked the light sword out of the other guard's belt. He had no time to strike—only to dash for the door. It was open. Jay was inside, had the door barred and was down the basement steps in the space of a few heartbeats. Upstairs there was a hoarse bawling. They would be closing in like a swarm of Venusian hornets in a few minutes.

THE university power plant was of the type which had come into general use after the growing scarcity of catalyte had made atomic destruction impracticable. Exactly the o p p o s i t e process was here employed—namely the integration of elements from basic hydrogen.

This process was carried on in enormously heavy spheres of polished metal with very thick walls and the "ashes" of the process were silicon and iron. Great spheres crowded the room, along with tanks of hydrogen produced by hydrolysis and a long switchboard which controlled all the university circuits.

But Jay was not interested in merely throwing the university group into darkness. He searched a storeroom adjacent to the power plant, found several barrels of sodium chloride. Feverishly, he shoveled this salt into an enormous vat that was collecting dust in the chemical room, dragged a hose from its reel and let the water run in. Then he busied himself with fashioning crude electrodes, which he connected to the switchboard with heavy cables.

Before throwing the switch he listened. He heard shouting above, followed by thunderous hammering on the door.

"Pound away!" He grinned and threw a switch.

There was one more thing to do. Sprinting to a box containing an emergency gas mask he broke the glass and slipped the helmet over his head. Then he sat down to wait.

The pounding was becoming more vigorous. The stout metal door could not stand it much longer.

The great vat had become a seething caldron and greenish vapors began to roll over the edges to settle on the ground, building up, stratum upon stratum, until it reached the ceiling. The light tubes g l o w e d a yellow-green through the gas, which was a very old weapon of war indeed—chlorine.

The Peacemakers burst through the door and the heavy gas billowed up to meet them. There were strangled curses, men coughing. Through the fog some fought their way out again.

Jay was grateful for the extreme specialization that had placed all technical knowledge in the hands of a few. So long had a tottering civilization depended on the technies that not one of Curtes' fighting men even recognized the gas.

Inadvertently they had put their prisoners in a place of safety. It would be a long time before any of the heavy chlorine reached the top floor, so high up and hermetically sealed. Instead, it was now pouring out of the open door upon the campus, advancing slowly, inexorably, as that phenomenon which had been unseen by a human being for hundreds of thousands of years—an ocean tide.

Dark figures lay upon the ground, writhing in the grass. Peacemakers, these, physically powerful, strangled by invisible fingers that clutched at their throats. Jay paused at the door, peering through his helmet. In a moist flood the gas poured over and past him.

More of the Peacemakers came on the

run, swords drawn. But this was an enemy they could not fight. Some went down—others turned and ran. Jay followed, light keen sword unsheathed. But faster than he could run, rolled the green flood, washing up against buildings, against the outer walls, throwing vagrant wisps like spume toward the glistening dome high overhead.

Jay rounded a corner so that he could see the *Ventura*, her base brightly illuminated, her nose shrouded in shadows. The beckoning yellow light of Ridan glowed beside and beyond the dead, mist-enshrouded corpse of the sun. In less than an hour, the ship was to be launched. Now Curtes was in possession. And in there, somewhere in that shining hull, was Idar!

Scarcely had the gas reached the ship when men started to run out. These were all Peacemakers and with stark panic Jay remembered that automatic fans were sucking in air and distributing it all over the ship. The atmospheric regenerators were not used except in space. He began to run, though his gas mask hindered breathing.

She would be killed, he thought, running for the gangway. While there were space-suits in the lockers, effective protection against any kind of gas, Jay and Elson were the only ones who knew the lock combination. And Idar was in there!

One of the sclenoid lifts was down and into this Jay plunged, throwing the magnetic switch far over. The little shell was sucked into the vortex with sickening acceleration, slowed to a stop as quickly and Jay stepped out on the platform just below the navigating room. Glancing out of a port he saw the gas blanket below, filming the grotesquely sprawled bodies of dead men. But even here was a haze of gas, sucked to this height by the fans.

He heard a slight whirring. For a second, he puzzled over it. Then came recognition and with it a great thankfulness. It was the sound of the emergency regenerator in the navigating room overhead. That meant that Idar was safe! She had locked herself in, turned off the ventilator louvers, turned on the little emergency air conditioner.

Jay scrambled up the short metal ladder, pounded with the hilt of his sword on the overhead trap.

"Open! This is Jay! Unlock the door!" The mask muffled his words.

But the hatch flew upward, and Jay scrambled through, kicking the metal leaves shut and tearing off his mask. He looked around him. Idar was there. She was even more pallid than usual, only the pink glow of blood under her skin asserting her great vitality.

Idar—more lovely, more desirable than she had ever seemed before! Her burnished hair was disarrayed, falling in bronze ripples over her shoulder. A sleeve of her blouse was ripped, revealing a patch of dazzling white skin. Her eyes, as they fell on the technie, were wide.

But what made Jay grasp his sword more firmly was the sight of Curtes, reckless, flushed with victory and power. He was sitting on the little raised metal platform about which were grouped the controlling instruments of the *Ventura* and one sinewy hand was holding Idar firmly by the wrist.

In one swift glance, Jay took this in. His eyes, passing on, saw Kiro lying on the floor at the base of the platform. The big, bragging lout was a shocking sight. His face was a bleeding pulp. His large innocent eyes were swollen almost shut and his coarse unruly hair was clotted with blood.

CHAPTER V

The Triumph of the Technies

CURTES laughed with savage amusement. "Curious what the sight of a woman can do, eh? See what it did to Kiro. Such a great trusting innocent that he let a puny technie bat him over the head! The greatest mouth-fighter, the biggest eater and drinker, the loudest talker, the first to dodge a real battle.

"But he loses his heart to a pretty and

fragile piece of protoplasm—is that the right word?—and what does he do?" Curtes theatrically portrayed amazement. "He came up here just as I nearly had this interesting little woman convinced, and attacked *me!*"

"Please! *Please!* Oh, Jay, why did you come?"

"I came," Jay said levelly, "to kill Curtes."

The chief of the Peacemakers laughed again. "As it affected this great ox, so did it the human test tube, eh? Well, little man, it would amuse me to split you with my sword. But as you remarked not so long ago, 'It would serve no useful purpose.'

"As a matter of fact, I need you. I have taken over the *Ventura*. You shall navigate her. And to show that I am not unreasonable you may take along as many of your group as can be accommodated after my friends have been berthed."

Jay did not answer.

"Idar, of course, belongs to me. But do not despair—if the voyage takes ten years, I will probably restore her to you. In making up our passenger list it'll be women and children first—especially pretty girl-children that will be well grown in ten years." Curtes laughed insolently.

The girl spoke for the second time. "Go back, Jay, while you can. Get help. Never mind what happens to me. The *Ventura* must leave with a full crew if the rest of the world is to be saved."

"But—but you?"

"Never mind me!" Idar's voice was vibrant with some inner throb of courage. "Go quickly. I'm not afraid of being a sacrifice."

Curtes' rich, ruthless voice intervened. "I know what's on your mind, Val. Lock me into space if I'm not surprised by your mettle! If you were man-sized you'd be a real man! But listen—don't come at me with that little toy! If you try it, *she'll* pay!"

Sweat stood on Jay's forehead. He almost hurled himself upon the seated mocking figure to clash his blade against that held so ready to hand by his enemy. But he forced back the impulse—too much was at stake.

"Curtes!" He forced himself to speak calmly, to smile with amusement he did not feel. "Your men are dead or driven out by the gas. How do you expect to carry on your insane plans? Go now. We will not interfere—but what do you propose?"

Curtes laughed. "Gas? Let me show you a trick I just learned from Idar." He fumbled at the controls, found the quadrant he was looking for, jerked a lever.

The ship trembled. There was a dull booming sound and through the ports came a blinding, electric glare. Then, as Curtes jerked the lever back, came darkness and silence.

"Look outside!" Curtes commanded.

Jay backed away until he could peer out through one of the ports. He knew what to expect. Curtes had started a retarding rocket in the nose of the ship. The great blast had blown the vast vitrine canopy of the university group into space. Fresh air had been sucked into the inclosure, sweeping it clear of gas. The frigid outside air was followed by straggling groups of Peacemakers, who had sought safety outside the walls.

"Not a bad thought," Jay grinned sardonically. "But I still refuse to help you."

"Not if I kill you?"

"Not if you could kill me."

"And her?"

"She has given you her answer."

"If he doesn't kill me," Idar declared defiantly, "he will never draw a safe breath!"

"*Pluto!*" Curtes swore. "Never would I have credited technies with spines like that! Yet there is another way. Val, you know where your friends are? They're on the top floor of that building a quarter of a mile away. Now I want you to note the direction of that maneuvering rocket. See it? Note that it points directly at that building? And just about level with the top floor?

"Now then, what would happen if I should turn on that rocket for about thirty seconds?"

"One thing that would happen"—Jay grinned mirthlessly—"is that you'd blow the building about halfway around Mercury. Another thing—and it's quite important to you if you intend to get to the new planet—the reaction would tip this ship over on its side and you could never launch it."

Curtes looked at the technie for a moment in thoughtful silence. He was not a little baffled by his contact with a member of the class that he had always viewed with good-natured contempt, although until this insurrection he had been careful to conceal his true opinions.

PHYSICAL courage was something he could appreciate but in bodies such as these, so frail compared to his own tremendous thews, it was more than puzzling. Curtes knew, in a general way, that natural selection had created in the technies a race of unusual brainpower. He did not realize that the same process connoted an unusual nervous organization, reflexes unusually fast, and that such a man could be really dangerous.

Curtes had no time to philosophize. His plans had gone well so far but his position was still desperate. His jaws tightened and his words were freighted with menace.

"You have brought it upon this woman! Now watch, technie. If you change your mind speak fast, for bones snap quickly!"

His powerful hand jerked Idar's wrist closer and with the other he seized her forearm. Slowly he applied a twisting pressure. The girl moaned slightly.

"*Stop!* I'll do it!"

But as that agonized cry left Jay's throat he saw vaguely, through hate-dimmed eyes, something that looked like a great gaunt bear heave itself up from the floor and hurl itself at Curtes. Idar was thrown to one side against a curved section of the wall with stunning force. Jay had a confused impression of Kiro's shaggy ferocity, of the gory personification of destruction.

But Curtes, with a single pivoting movement, left his seat. The long heavy sword came up, down again. There was a heart-stopping, chunking sound—then Curtes wiped his blade on the lifeless body that had housed, in the final test, a valorous heart.

"One surprise after another!" Curtes remarked, sneering thinly. "What is life after all? After millions of years, after many generations, that fine brain of yours, Val, has grown a great distance away from the level of poor Kiro. And yet, in the space of a few minutes and just because of a woman, the two of you are going to be spitted on the blade of my sword!"

Jay advanced steadily. Gone now was all anger, all beclouding fury. With the perfect coordination of nerve and muscle so necessary in delicate scientific maneuvers, with the nice balance of a fine machine, the slight young scientist came toward the veteran of many fatal battles. The light glittering blade seemed inconsequential, childish. Curtes waited with disdainful confidence, his deadly weapon gripped in powerful fingers. And still Jay came forward.

It happened quickly. Without changing position, with a tigerish sweep of hissing steel, Curtes swept the place where Jay had stood—a blow powerful enough to cut him in two.

But the technie was not there. His faster nerve responses saved him. Before that cut was half completed he was out of the way and before Curtes was through with his grunt of surprise he had received a light cut on the side of his face.

"I could have put your eye out!" Jay remarked, standing well out of the way.

Curtes' answer was to rush in, his sword battering and slashing. This time Jay did not retreat, yet he was none the less elusive. He met each sharp vicious thrust and stroke. Curtes was used to feeling the shock of opposition, the harsh rasp of parry.

But now he could hardly tell when their weapons touched. His own seemed scarcely opposed yet each time it was deftly and lightly turned from its course. He became angry and when, aftter half a minute, he retreated, he felt fear for the first time in his life.

"This time you die," Jay announced softly, coming in again.

This time there was no flurry of blades, merely a gentle lethal hiss made by a keen edge. Their weapons did not even touch. There was merely a flash of glittering metal that withdrew as quickly as a streak of light.

Jay stood clear and watched the professional swordsman sink to the floor plates. His fatal wound was a small cut, hardly an inch long. But it was precisely at that place on the throat where the jugular vein pulsates just under the skin.

Quickly Jay turned to where Idar reclined. She had recovered consciousness and had watched the battle with horror-stricken eyes.

"Oh!" she sobbed.

There was still much to do. Glancing out of a port, Jay saw that the Peacemakers were congregating near the base of the ship. They were being kept from entering the ship by the residue of the gas still remaining inside the hull but it was rapidly thinning.

EVEN as Jay watched he saw a stream of men pouring into the gates, still others climbing the walls. It seemed as if the whole city of Sandos had come to the attack. One compact group wore the uniforms of the Palace Guards and from this came a violet flash.

Jay felt suddenly weak though the ship's metal skin saved him from the full force of the ray. The presence of this tabooed weapon pointed to the master, Undank! Others of the masters too were probably directing this attack.

It was a crowded moment. Far across the campus, by the light of the tubes that were still unbroken, a group of technies left their prison. They had heard the thunder of the rocket, realized its significance and broken out. Only one or two had swords—the other men were armed with whatever they could pick up. They formed a thin line of defense around the women, the children and the aged.

Jay watched them hesitate. They did not dare cross that open space so full of danger. How could he call them and clear the way?

In a flash an idea came. Jay leaped to the control seat. He set the stern rockets at quarter power—not sufficient to break away from Mercury's attraction. Then he began flipping the activating lever, up, down, up, down, in shorter or longer intervals.

Although he could not see, he knew what was happening. Each blast of the rockets was sending a tornado of blue electric fire a hundred yards in every direction. It enveloped the Peacemakers, sent them scurrying, gasping and singed. It eroded the concrete emplacement, sending stinging bits into the mob with the speed of alpha particles.

Each blast was like the hot breath of Hades; and the mob. Palace Guards and Peacemakers alike, crowded and crushed one another in order to get outside, to put the high walls between themselves and this electronic inferno.

But the technies, at a comparatively comforting distance, quickly noticed that these blasts of fury constituted the Interplanetary code: *Dah-dah-dit-dit-dah; dit-dit-dit-dah; dah-dah; dit-dit.*

"Come!" That was what Jay was spelling, over and over.

The technies came. They ran across a campus denuded alike of plant and animal life, across soil blackened and hot to their feet. If they touched skeletons of what had been men, those skeletons crumbled, so completely had they been burned.

Jay saw them coming and, pushing the controller back to zero, approached Idar, who had watched with fascinated eyes.

"Idar," he said, quite humbly, "not long ago I asked you—"

"I know!" She smiled in a way that could not be misunderstood. But in a moment she gently disengaged herself from his embrace. Elson, shaken but triumphant, had come with the rest of the technies through the hatch. Paying no attention to them he seated himself at a transit instrument.

Jay responded to discipline. He leaped

(Concluded on page 161)

A stir of movement on the horizon caught Jane's eye

THE BORE

A New Story by JAMES BLISH

It took an earthquakian tide to convince Captain Jane Gillespie of the Hyperion that Ted Prosser knew his celestial mechanics!

PRESUMABLY Central Solar had made Capt. Jane Gillespie gunnery officer of the *Hyperion* for its usual reasons. These included, besides the ability to pass the necessary examinations, a theory that women were historically bloodthirstier than men when given half a chance.

Possibly, Jane thought, assigning her to serve under Ted Prosser had been a delicate trick to make her feel bloodthirsty *all* the time. At least, it had that

effect. If only the commander weren't so terribly dull.

The *Hyperion* grounded roughly, with a noise like an oil drum being dropped fifty feet into a quarry. Jane gritted her teeth, unstrapped her safety belts, and slid back the after half of the turret. She burned herself on the breech of one of the blasters and swore in an unladylike manner. Half-blinded though she was by the glory of the triple sun, she had been able to see that their planet had been a wild and tumbled place. But why had Prosser bounced the cruiser off it like a billiard ball? Surely there should be at least one reasonably flat place on a barren planet; and for all his apparent timidity, Prosser was a three-star pilot.

Oh, well. With the overdrive out, and the whole star-group englobed by Lyran battlecraft, a dent here and there hardly mattered. She straightened, trying to readjust to the comparative dimness of the companionway.

The intercom crackled. "Gunnery?" Prosser's quiet voice said.

"All shipshape here, sir," Jane said.

"Good. Better report forward. Doubt that we'll need the guns again."

"Yessir." Yah, you doubt it, she thought. You're just hoping. Where we went any Lyran worth his salt can follow.

Nevertheless she shunted the gun-deck generator into the accumulator circuit, leaving nothing running but the refrigs. Down below, she could hear magnetic shoes clomping purposefully for the overdrive housings, and then a squeal of metal.

Cutting parts already. Prosser's a good executive on things like this, she thought grudgingly. Things moved. If they made his control-board desk-shaped—

The light was much brighter on the bridge. The commander was studying a chart, completely absorbed. Jane goggled out the window.

"What in blazes—" she said.

Prosser looked up and smiled. "Interesting, isn't it?"

"Interesting!" she gasped. "Great Sirius, Commander, it's downright impossible!"

Rocks. Billions of them. They were tumbled in a loose, jagged mass all the way from the *Hyperion* to the horizon. Most of them were as big as the ship, and the rest were bigger.

That was the sum total of the landscape. In all directions.

"No, hardly impossible," Prosser said. "I imagine we have here one of the only planets in the universe that really was formed by the planetesimal method. We're lucky we didn't hit it a few million years later, or we'd have sunk right down to the core."

"Why?"

"Friction. You saw the set-up here. This cosmic junkpile sits right at the common axis of two stars. Its period of rotation is the same as the revolution of the stars around each other, of course, but there's a microscopic lag. A tidal pulsation, a seiche, results; the rocks grind against each other. Nothing but a sea of dust here eventually."

Jane listened, more fascinated by the tone than by the content. And the crushing bore had the nerve to be handsome!

"I saw three stars," she pointed out.

"Yes, but the little one travels in a long ellipse, in and out of the orbit of the other two. Rather like Pluto. It's an egg-shaped ellipse, with us at the focus of the small end." Prosser tapped his teeth reflectively with a stylus. "We're near periastron, too. Hmm."

He bent over the chart again. In the silence, Jane became conscious of a low, terrifying sound—a hollow, deep, steady groan. It seemed to come from all sides, as if from the metal walls of the ship itself. She pushed a strand of red hair out of her eyes with one oily glove and peered out. Nothing. The tumbled wilderness of boulders was unchanged.

"That noise," she said uneasily. "Is that your seiche? If so, aren't there likely to be earthquakes?"

"Oh, no," he said, preoccupied. "A minor collapse here and there, that's all. Geologically this world is practically homogeneous. If—"

The PPI scope said *"Gleep!"* and produced a green, wiggling pip.

"Hmm!" said Prosser. "So they're coming in after us, after all."

"I thought they would," Jane said grimly. "Those babies don't stump easily. I'll bet they've figured some cute dodge for beating the gravity."

"There's only one of them," Prosser said, unruffled. "Possibly we can hold them off until the overdrive is repaired. You'd better get back to the turret."

Jane gave him her very best glare before leaving, but he was already bend-

ing over the chart, the Lyran apparently forgotten.

IN the turret scope the Lyran's intention shortly became plain enough. The delicate, spidery creatures were not going to risk teetering down through the tangled gravity-web of the double sun. Only one error on the part of their pilot, one failure in their odd driving mechanism, and they'd be subjected to more G's than their pulpy innards could take. A slip of only a few miles in this distorted space could be equivalent to three or four G's of acceleration.

Instead, the stalking battlecraft was riding in free on the relatively tight sphere of influence of the dwarf star, the third one in the group. The ship was on the inside of the star's orbit, perhaps four AU's from the star proper. Evidently its pilot figured on being brought close enough to the neutral point near the planet to be able to maneuver.

Jane cut her generators back in and alerted the two flank turrets. In an Earthman, the stunt could be called daring; with the Lyrans, only a measure of the implacability of their hatred. The Lyran policies of Admiral Holmsprough, nearly a century ago now, had given them ample reason to hate Earthmen. Brute force had seemed so easy to use with creatures who could be killed with a slap of an open palm. A third generation of Earthmen was paying now for the Admiral's genially bloody shortsightedness.

And though Earth had little stomach for the war at this late date, no Lyran vessel had ever been known to give up an antagonist until one or the other was destroyed. For the Lyrans, it was a holy war.

"Hello the bridge."

"Go ahead," the intercom said.

"All tight in gunnery, sir. I make it twenty minutes to first contact. They're riding the little star—"

"Yes, I see them, Captain," Prosser's voice said dryly. "Hold your fire. I don't want to divert any more current from repairs than we have to."

Jane gritted her teeth again. The action was getting to be chronic. She'd be lucky if she had any teeth left after this flight. Nice teeth, too. "Beg pardon, sir," she said. "But if we don't hit them in flight, they'll land out of range and bring up their mobile nutcrackers. Our screens aren't good enough to—"

"I'm aware of that. Hold your fire."

"Yes, sir."

Twenty blasted minutes of inaction. After that, heaven only knew how many minutes more of waiting for the Lyrans to surround them and open them up like a stubborn can of tomatoes. While Prosser, no doubt, watched interestedly the passage of the little star. . . .

Abruptly, a bug-eyed s i l v e r fish roared over them and the world turned blue-white and bounced, hard. The alarm jangled and little red lights sprinkled the board. The *Hyperion* rocked gently, like a baby's cradle, and lay still.

With one hand Jane reset the broken circuits; with the other, she dabbed at her nose. She looked interestedly at her handkerchief.

"Uh-huh," she said. "First blood. It happens every time."

The alarms finally shut up. The Lyrans were out of sight over the surrealistic horizon. The *Hyperion* lay, slightly cock-eyed, near the bottom of a smooth crater, from which the rocks had been neatly boiled away.

The biggest alarm-clock in the world went off. General Alarm! Talking about locking the door after—

"All hands make fast," Prosser said calmly. "In two minutes there will be a heavy shock. Overdrive crew, suspend operations. General Lights Out. All current into the screens."

"Ahoy the bridge!"

"Yes, Captain?" He sounded amused, blast him!

"Look, Commander," she said desperately. "They could be landing in two minutes and I'll have no current for the blasters. And we can't hope to hold a full drive on the screens for as long as they're willing to hold out. We've just stood up under a good healthy shock under ordinary power and you said there'd be no earthquakes—"

"Captain, you protest too much. Follow orders."

With an infuriated snap Jane cut off the intercom. She yearned to express herself. No words sufficiently horrid for the occasion presented themselves. The best she could manage was an inadequately pre-symbolic snarl. "Aagh!" she told the dead mike.

At the same moment, she caught a glimpse of her face in the silvery albedo sight hung between the blasters. It was

quite a pretty face, with a soft mouth and green eyes. An entirely inadequate face. She felt more like the Gorgon Medusa.

A stir of movement on the horizon caught her eye. It seemed only a delicate, even ripple in the corrugated landscape. It advanced toward the *Hyperion.*

As it came into direct visibility, she was horrified to see rocks toppling like ten-pins. The whole junkpile was heaving toward them in a single heavy wave!

At the edge of the new crater, blocks as big as buildings swooped high and plunged down upon them. Involuntarily, she put her hands over her eyes. A nuclear bomb was one thing, but this—

In the self-imposed darkness she felt herself swooping upward. She gasped and looked again.

The *Hyperion,* bubble-gummed by her meteor screens, rode wildly up through the Gargantuan rubble and bounded into the air. At the top of her leap, her jets blew, and she settled gently back again. The roaring temblor was already halfway removed from her, heading for the other horizon.

The General Alarm clamored again, and Jane flipped the intercom back on. She was enraged to find that her hand was trembling.

"That will be all for now," Prosser's voice said in his best academic tone. "Resume operations as before."

And the liar had said this planet had no earthquakes! How had he known—and to the split second?

"It's quite simple if you'll stop and think, Captain," the intercom said gravely. With a superb burst of willpower Jane restrained herself and returned her operational setup to normality. She could use some understandable opposition right now—a few Lyrans, maybe.

THERE were more than a few Lyrans. They came picking their way delicately among the boulders, their long thin legs indifferent to degree of grade, their self-contained metabolisms ignorant of the near-vacuum around them. They flung webs across the chasms as they went, and as they spun them, mechanisms picked their way across them without apparent guidance. There were thousands of them, perhaps hundreds of thousands. Their bodies, not quite as big as footballs, bobbed gently in the hammocks of their legs.

Jane pedaled the turret and swung the blasters down on the nearest group. This was tough terrain; it was necessary not to waste power in blasting away rock, but to catch as many of the enemy as possible in an exposed position.

A group of thirty or forty topped a monolith, and a mechanism ran to them across a web. Jane caught them in the albedo and thumbed the trips. The blasters said *"Chuff!"* and reared back affectionately into her lap.

"Captain Gillespie, you had no orders to fire!"

Jane bit her lip. Under any sane commander she'd have been firing long before this. "Excuse me, sir," she said bitterly. "Heat of the moment."

"Very well."

Down below, lathes whined, and there was the irritating sound of a signal-generator ramming its impulses through an audio tester. Something purred briefly and a wave of giddy sickness went through her body. A wave of hope went with it, only to die with the overdrive pulse.

Outside, wavery streamers of blue reached out from all sides and fingered delicately at the *Hyperion's* screens. The screen generators howled, and Jane could almost smell the smoking insulation of their windings.

It would be like this from now on, until the generators gave out, the can opened, and its contents spilled out over the rocks in tomato-red splashes. Shooting through a can opener barrage was rough work, even when you had a commander who let you shoot. And the quick failure of that surge from the overdrive was hardly reassuring.

Jane felt mutinous. Was Prosser off his rocker? Or just bemused by too much celestial mechanics? He'd had the goods on that inexplicable earthquake, but in the present engagement he could not be doing worse if he were on the Lyrans' side.

With an adequate defense, their chances of escape were nearly even. A ship in overdrive could not be detected; they could laugh at the globe of Lyran craft outside this crazy stellar system. Only the fact that Prosser hadn't expected to be mobbed in an unknown corner of the galaxy had led to the catastrophe with the overdrive in the first place.

Yet Prosser was throwing away a good gamble as if he had a sure thing on his hands. Any fool should know that a can opener attack can kill a straight screen defense in under two hours. It was a freshman tactical problem. And any three-star pilot should know that a burnt-out overdrive takes two hours to rewind and about an hour to re-align. It was an arithmetic problem, a grammar-school problem. Two hours minus three hours leaves minus one hour.

For men who would be dead at the beginning of that hell, it was as good as a millennium.

The Lyrans had seen the brief flickering of the *Hyperion* as the overdrive had been tested, and were bringing up new nutcrackers as fast as they could spin. The fixed glare of the visible sun outside was completely fogged out in electrical blue haze, and the screen generators were yelling in anguish. The smell of hot insulation was no illusion now—it crept into the turret on smoky tendrils.

And still no order to fire. It was already too late for effective fire. The turrets would have to rake blindly. But even that was better than maddening inaction.

The General Alarm again!

Was Prosser going to try to kick free on the jets? Didn't he know that the can openers had him pinned?

"All hands make fast. General Lights Out. Full drive on the screen," Prosser said. Then, astonishingly, he laughed. "This will make the last one look pretty sick."

The cubby darkened. Jane cut out her circuits, in complete despair. "This better be good," she muttered fiercely. "This just damn well better be good."

The ship's interior was blacked out now. The sunlight came through again, about half as bright as it had been in clear air, as the full-driven screens beat back the can openers. Did Prosser have another earthquake up his sleeve? Jane watched the horizon.

For a moment, nothing happened.

Then the entire horizon bucked and shot skyward.

The groaning of the rock-shoulders changed from a gentle straining noise to a howl of protest, to a bellow of outrage, to a terrible pounding waterfall that shook the ship despite the screens. It got louder. It got still louder. It hit *forte possible* and got louder still.

A tidal-wave of rocks fully forty miles high thundered down upon the *Hyperion*. With it came a fountaining shrapnel of chips, and a sable dustcloud.

Just before the whole planet threw itself in Jane's face, the dust blotted out the last thin streamer of sunlight.

SOMEBODY seemed to be kissing her. She punched instinctively, but the pressure had melted away. "I'll fix you, you—" she told the empty air. Kissed by an earthquake. It was entirely too much.

A moment later, she thought to open her eyes. She was sprawled on the deck of the bridge, one shoulder tipped up against a bulkhead. It couldn't have been Prosser who'd been kissing her. He was twenty feet away, bending over his everlasting charts. Still, there was something almost demure about his preoccupation.

She sat up, painfully, all indignation right down to her left and littlest toenail. "Prosser!" she said hoarsely. "You said no earthquakes! I'll mutiny! I'll—"

He turned and regarded her, mildly. If he was glad to see her awaken, he didn't show it. With that expression, he could have been sorry that she hadn't died and she still wouldn't have been able to guess it.

Nevertheless, not even impossible earthquakes have mustaches.

"Did we make it?"

"Yes. We're out and away—twenty light-years now. They never knew what hit them, to coin a phrase."

"I don't, either, blast it," she said. "Explain to me before I kill you."

"It's simple enough. Come over here." He waited until she had staggered to her feet by herself, as indifferent as ever to anything but his own rarefied universe. When she got to the chart table, he drew an egg on it.

"That's the orbit of the little star," he said. "And here was where we were." He put a pinpoint inside the little end of the egg. Then he drew a big circle around the pinpoint. "And that's the orbit of the paired-off stars, one on each side of the circle." He put them in.

"Yes?" she said dangerously.

"So here is the little star, coming around the small end of the egg at top speed," he said. "The big paired-off stars are whipping it around a pretty sharp turn, and bringing it very close to that rockpile of a planet we were on, here."

He indicated the pinpoint. "Later, of course, the little star goes out to the big end of the egg, where the paired-off stars are a little slower to drag it back. But when it came around our end —the little end—it created a tide in all that loose rock we were sitting on."

"A tide!" Jane explained. "It looked like—like a— Prosser, there wasn't anything like it in the universe. How can you call it just a tide?"

"But that's all that it was. The very first shock that we felt was the tide the little star creates when it goes around the *big* end of the egg. That small toppling of the rock keeps on going 'round and 'round the planet all the time, because it goes in the same direction as the rotation of the planet and the revolution of the paired stars. It's augmented slightly by the seiche I told you about, too.

"But the motion of the seiche and the periodic tide is retrograde to the motion of the tide the little star pulls up when it goes around the small end of the egg. If the planet were all water, or all dust, that wouldn't matter. You'd just get a slightly bigger wave."

"Only about five miles high," Jane suggested.

"Not much greater than that," Prosser agreed, completely oblivious to the purring menace of Jane's tone. "In water or dust, currents opposing each other have plenty of chance to distribute their effects evenly throughout the medium; so that you don't get a really spectacular tidal wave except in harbors and other places where there's some shoaling. But when the units of the medium aren't molecules of water, but boulders as big as pyramids—well, you can see why that tide was forty miles high."

He pored over his own map absorbedly. "A really amazing layout," he told himself. "A heave like that every eight years—the grinding going on all the time—the minor tide pulsing alternately with the seiche— It would be interesting to know the Rockwell average of all that stone. How long before the whole planet's reduced to dust, do you suppose?"

Jane looked at him. And the man was handsome! Yet there was really only one word for him.

She said it.

"Bore!"

He raised his eyebrows at her. "Why, Jane, that's very good," he said, as if flattering a small child. "Yes: in effect, a bore—or, an eagre, as these countertides are sometimes called."

There was no help for it. He was inarguably handsome, he had gotten the *Hyperion* out of her trap by sheer brilliance, and he had even stolen a kiss while nobody was looking. But this was inexcusable.

She hit him.

He turned out to be strong, too.

196 Pages of Great Science Fiction Classics!

•

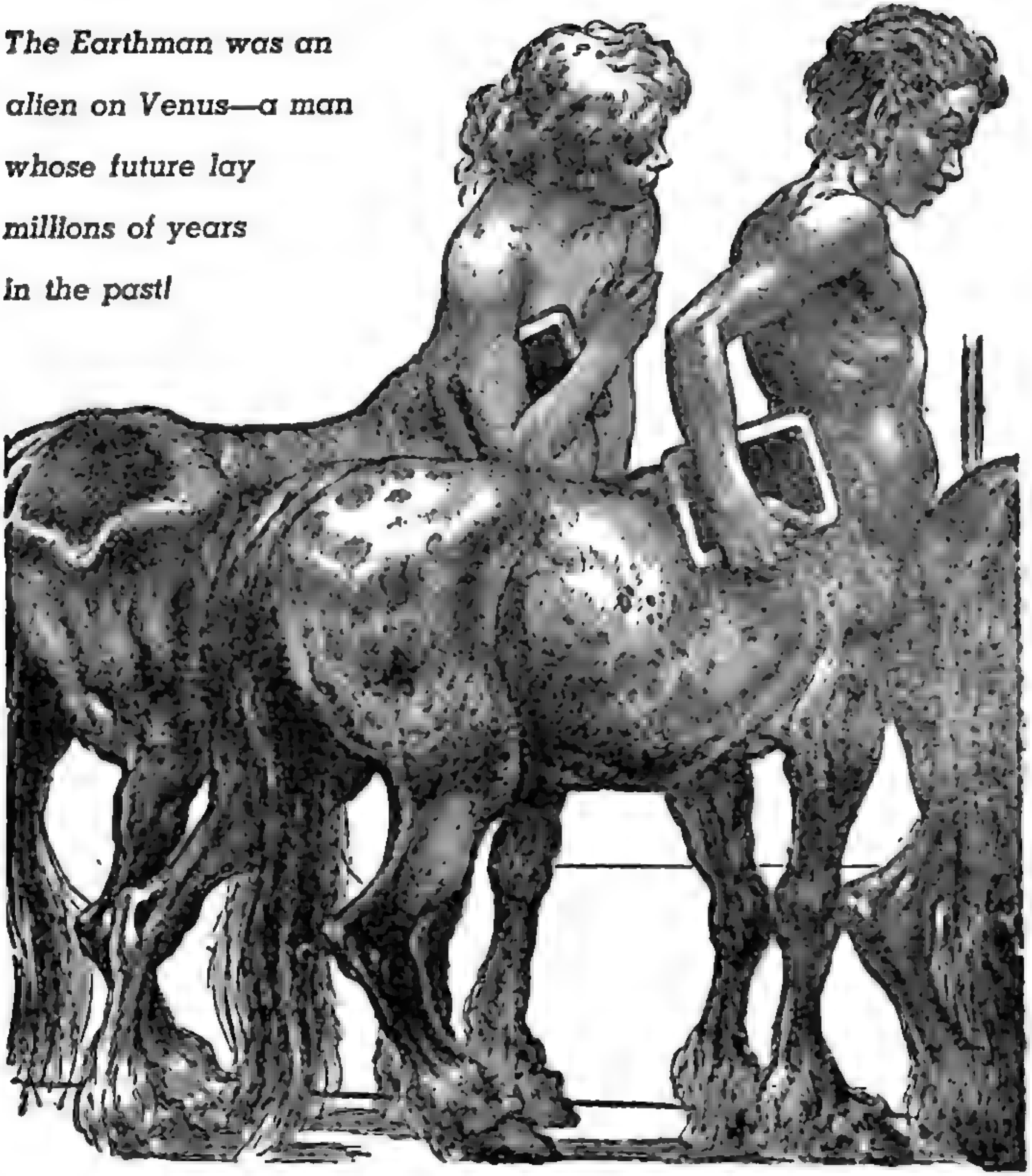
Announcing—the new 1950 edition of WONDER STORY ANNUAL, a big book for big stories! It is the first of a series of yearly anthologies—and in its pages, you will find such outstanding narratives as "The Onslaught From Rigel," an amazing complete novel by Fletcher Pratt, "The Eternal Man," a memorable novelet by D. D. Sharp, "The Robot Aliens," a novelet of the spaceways by Eando Binder, and other tales of exceptional quality. This long-awaited annual is a "must" for science fiction devotees—get your copy!

•

WONDER STORY ANNUAL

JUST OUT—ONLY 25c PER COPY AT ALL NEWSSTANDS!

The Earthman was an alien on Venus—a man whose future lay millions of years in the past!



The Man From

CHAPTER I

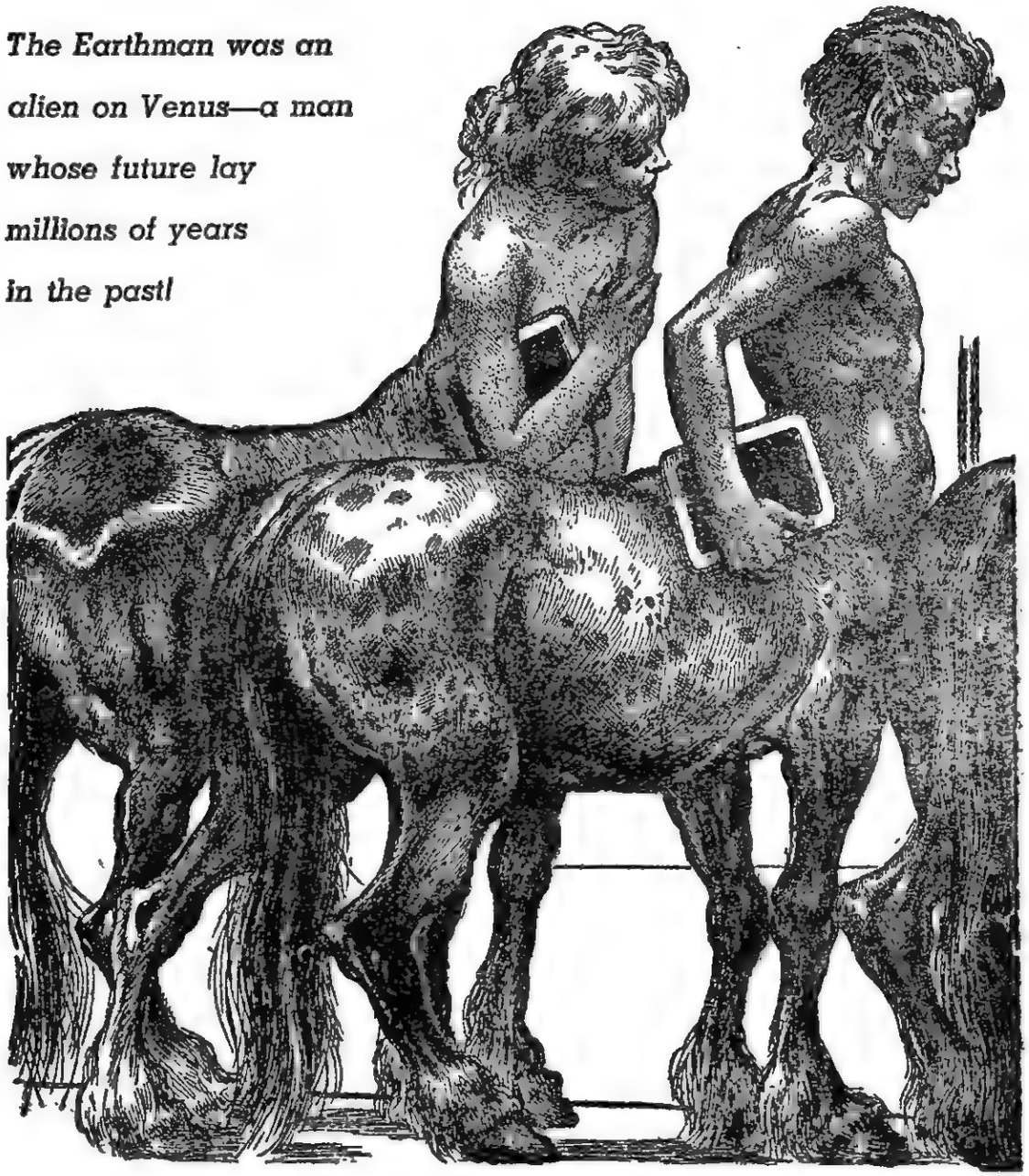
Biology Lecture

ONE of the greatest sights in Takon* these days was the exhibition of discoveries made in the Valley of Dur. In the building erected especially to house them Takonians and visitors from other cities crowded through the corridors, peering into the barred or glass-fronted cages, observing the contents with awe, interest or amusement according to their natures.

The crowd was formed for the most part

*All Venusian terms are rendered in their closest English equivalents.

The Earthman was an alien on Venus—a man whose future lay millions of years in the past!



a novelet by JOHN BEYNON HARRIS

They came to a cage occupied by a creature which stood on two legs, though it appeared designed to use four
Virgil Finlay
Copyright, 1934, by Continental Publications, Inc.

The Man From BEYOND

CHAPTER I

Biology Lecture

ONE of the greatest sights in Takon* these days was the exhibition of discoveries made in the Valley of Dur. In the building erected especially to house them Takonians and visitors from other cities crowded through the corridors, peering into the barred or glass-fronted cages, observing the contents with awe, interest or amusement according to their natures.

The crowd was formed for the most part of those persons who flock to any unusual sight, providing it is free or cheap. Their eyes dwelt upon the exhibits. Their minds were ready to marvel and be superficially impressed. But they had come to be amused and they faintly resented the efforts of the guides to stir their intelligent interest. One or two, perhaps, studied the cases with real appreciation.

But if the adults were superficial the same could not be said of the children. Every day saw teachers bringing their classes for a

*All Venusian terms are rendered in their closest English equivalents.

a novelet by JOHN BEYNON HARRIS

Copyright, 1934, by
Continental Publications, Inc.

BEYOND

of those persons who flock to any unusual sight, providing it is free or cheap. Their eyes dwelt upon the exhibits. Their minds were ready to marvel and be superficially impressed. But they had come to be amused and they faintly resented the efforts of the guides to stir their intelligent interest. One or two, perhaps, studied the cases with real appreciation.

But if the adults were superficial the same could not be said of the children. Every day saw teachers bringing their classes for a

practical demonstration of the planet's prehistoric condition. Even now Magon, a biology teacher in one of Takon's leading schools, was having difficulty restraining his twenty pupils for the arrival of a guide. He had marshaled them beside the entrance and, to keep them from straying, was talking of the Valley of Dur.

"The condition of the Valley was purely fortuitous and it is unique here upon Venus," he said. "Nothing remotely resembling it has been found, and it is the opinion of the experts that nothing like it exists anywhere else. This exhibition you are going to see is neither a museum nor a zoo, yet it is both."

His pupils only half attended. They were fidgeting, casting expectant glances down the row of cage fronts, craning to see over one another's backs, the more excitable among them occasionally rising on their hind legs for a better view. The passing Takonian citizens regarded their youthful enthusiasm with a mild amusement. Magon smoothed back the silver fur on his head with one hand and continued to talk.

"The creatures you will see belong to all ages of our world. Some are so old that they roamed Venus long before our race appeared. Others are more recent, contemporaries of those ancestors of ours who, in a terrible world, were forever scuttling to cover as fast as their six legs could carry them."

"*Six* legs, sir?" asked a surprised voice.

Some of the youths in the group sniggered but Magon explained considerately.

"Yes, Sadul, six legs. Did you not know that our remote ancestors used all six of their limbs to get them along? It took them many thousand of years to turn themselves into quadrupeds but until they did that no progress was possible. The forelimbs could not develop such sensitive hands as ours until they were carried clear of the ground."

"Our ancestors were animals, sir?"

"Well—er—something very much like that." Magon lowered his voice in order that the ears of passing citizens might not be offended. "But once they got their forelegs off the ground, released from the necessity of carrying their weight, the great change began. We were on the upward climb—and since then we've never stopped climbing."

HE LOOKED around at the circle of eager-eyed, silver-furred faces about him. His eyes dwelt a moment on the slender tentacles which had developed from stubby toes on the forefeet. There was something magical in evolution, something glorious in the fact that he and his race were the crown of progress.

It was a very wonderful thing to have done, to have changed from shaggy six-footed beasts to creatures who stood proudly upon four, the whole front part of the body raised to the perpendicular to support heads which looked out proudly and unashamed at the world.

Admittedly several of his class appeared to have neglected their coats in a way which was scarcely a credit to the race—the silver fur was muddied and rumpled—but then, boys will be boys. No doubt they would trim better and brush better as they grew older.

"The Valley of Dur—" he began again but at that moment the guide arrived.

"The party from the school, sir?"

"Yes."

"This way, please. Do they understand about the Valley, sir?" he added.

"Most of them," Magon admitted. "But it might be as well—"

"Certainly."

The guide broke into a highspeed recitation which he had evidently made many times before.

"The Valley of Dur may be called a unique phenomenon. At some remote date in the planet's history certain internal gases combined in a way yet imperfectly understood and issued forth through cracks in the crust at this place, and this place only.

"The mixture had two properties. It not only anaesthetized but it also preserved indefinitely. The result was to produce a form of suspended animation. Everything that was in the Valley of Dur has remained as it was when the gas first broke out. Everything which has entered the Valley since has remained there imperishably. There is no apparent limit to the length of time that this preservation may continue.

"Among the ancients the place was regarded with superstitious fear and though in more recent times many attempts have been made to explore it none were successful until a year ago when a mask which

could withstand the gas was at last devised.

"It was then discovered that the animals and plants in the Valley were not petrified as had hitherto been believed but could, by means of certain treatment, be revived. Such are the specimens you are about to see—the flora and fauna of a million years ago—yet alive today."

He paused opposite the first case.

"Here we have a glimpse of the carboniferous era—the tree ferns and giant mosses thriving in a specially prepared atmosphere, continuing the lives which were suspended when Venus was young. We hope to be able to grow more specimens from the spores of these. And here," he passed to the next case, "we see the beginning of one of Nature's most graceful experiments—the earliest form of flower."

His audience stared in dutiful attention at the large white blossoms which confronted them. They were not very interesting. Fauna has a far greater appeal to the adolescent mind than flora. A mighty roar caused the building to tremble. Eyes were switched from the magnolia-like blossoms to glance up the passage in anticipatory excitement.

Attention to the guide became even more perfunctory. Only Magon, to the exasperation of his pupils, thought it fit to ask a few questions. At last however the preliminary botanical cases were left behind and they came to the first of the cages.

BEHIND the bars a reptilian creature, which might have been described as a biped, had its tail not played so great a part in supporting it, was hurrying tirelessly and without purpose to and fro, glaring at as much of the world as it could from intense small eyes. Every now and then it would throw back its head and utter a kind of strangled shriek.

It was an unattractive creature covered with a gray-green hide, very smooth. Its contours were almost streamlined but managed to appear clumsy. In it, as in so many of the earlier forms, one seemed to feel that Nature was getting her hand in for the real job.

She had already learned to model after a crude fashion when she made this running dinosaur but her sense of proportion was not good and she lacked the deftness necessary to produce the finer bits of modeling which she later achieved. She could not, one felt, even had she wanted, have then produced fur or feathers to clothe the creature's nakedness.

"This," said the guide, waving a proprietary hand, "is what we call *Struthiomimus,* one of the running dinosaurs capable of traveling at high speed, which it does for purposes of defense, not attack, being a vegetarian."

There was a slight pause while his listeners sorted out the involved sentence. "You mean that it runs away?" asked a voice.

"Yes."

They all looked a little disappointed, a trifle contemptuous of the unfortunate *Struthiomimus.* They wanted stronger meat. They longed to see—(behind bars)—those ancient monsters which had been lords of the world, whose rumbling bellows had sent *Struthiomimus* and the rest scuttling for cover. The guide continued in his own good time.

"The next is a fine specimen of *Hesperornis,* the toothed bird. This creature, filling a place between the *Archeopteryx* and the modern bird, is particularly interesting."

But the class did not agree. As they filed slowly on past cage after cage it was noticeable that their own opinions and that of the guide seldom coincided. The more majestic and terrifying reptiles he dismissed with a curt, "These are of little interest, being sterile branches of the main stem of evolution—Nature's failures."

They came at length to a small cage, occupied by a solitary curious creature which stood erect upon two legs though it appeared to be designed to use four.

"This," said the guide, "is one of our most puzzling finds. We have not yet been able to classify it into any known category. There has been such a rush that the specialists have not as yet had time to accord it the attention it deserves. Obviously, it comes from an advanced date, for it bears some fur, though this is localized in patches, notably on the head and face.

"It is particularly adept upon two feet, which points to a long line of development. And yet, for all we know of it, the creature might have occurred fully developed and without any evolution—though of course you will realize that such a thing could not possibly happen."

"Among the other odd facts which our preliminary observation has revealed is that, although its teeth are indisputably those of a herbivore, it has carnivorous tastes—altogether a most puzzling creature. We hope to find others before the examination of the Valley is ended."

The creature raised its head and looked at them from sullen eyes. Its mouth opened but instead of the expected bellow there came from it a stream of clattering gibberish which it accompanied with curious motions of its forelimbs.

THE interest of some of the class was at last aroused. Here was a real mystery about which the experts could as yet claim to know little more than themselves. The young Sadul, for instance, was far more intrigued by it than he had been by those monsters with the polysyllabic names. He drew closer to the bars, observing it intently.

The creature's eyes met his own and held them. More queer jabber issued from its mouth. It advanced to the front of the cage, coming quite near to him. Sadul held his ground—it did not look dangerous. With one foot it smoothed the soil of the floor, then squatted down to scrabble in the dirt.

"What's it doing?" asked someone.

"Probably scratching for something to eat," suggested another.

Sadul continued to watch with interest. When the guide moved the party on he contrived to remain behind unnoticed. He was untroubled by the presence of other spectators, since most of them had gravitated to watch the larger reptiles feed.

After awhile the creature rose to its feet again and extended one paw towards the ground. It had scrawled a series of queer lines in the dust. They made neither pattern nor picture. They did not seem to mean anything. Yet there was something regular about them.

Sadul looked blankly at them and then back to the face of the creature. It made a quick movement towards the scrawls. Sadul continued to stare blankly. It advanced, smoothed out the ground once more with its foot and began to scrabble again. Sadul wondered whether or not he should move on. He ought, he knew, to have kept with the rest. Magon might be nasty about it. Well, he'd stay just long enough to see what the creature was doing this time.

It stood back and pointed again. Sadul was amazed. In the dirt was a drawing of a Takonian such as himself. The creature was pointing first to himself and then back to the drawing.

Sadul grew excited. He had made a discovery? What was this creature which could draw? He had never heard of such a thing. His first impulse was to run after the rest and tell them. But he hesitated and curiosity got the better of him.

Rather doubtfully, he opened the bag at his side and drew out his writing tablet and stylus. The creature excitedly thrust both paws through the bars for them and sat down, scratching experimentally with the wrong end of the stylus. Sadul corrected it, then leaned close to the bars, watching over its shoulder.

First the creature made a round mark in the middle of the tablet, then it pointed up. Sadul looked at the ceiling, but quite failed to see anything remarkable there. The creature shook its head impatiently. About the mark it drew a circle with a small spot on the circumference—outside that another circle with a similar spot, then a third. Still Sadul could see no meaning.

Beside the spot on the second circle the creature drew a small sketch of a Takonian. Beside the spot on the third, a creature like itself. Sadul followed intently. It was trying very hard to convey something but for the life of him he could not see what it was. Again a paw pointed up at the light glove, then the forelimbs were held wide apart.

The light—an enormous light!

Suddenly Sadul got it—the sun—the sun and the planets! He nearly choked with excitement. Reaching between the bars, he grabbed his tablet and ran off up the corridor in search of his party. The man in the cage watched him go and as Sadul's shouts diminshed in the distance he smiled his first smile for a very long time.

GOIN, the lecturer in phonetics, wandered into the study of his friend Dagul, the anthropologist in the University of Takon. Dagul, who was getting on in years as the grizzling of his silver fur testified, looked up with a frown of irritation at the interruption. It faded at the sight of Goin.

"Sorry," he apologized. "I think I'm a bit overworked. This Dur business gives such masses of material that I can't leave it alone."

"If you're too busy—?"

"No, no. Come along in. Glad to throw it off for a time."

They crossed to a low divan where they squatted, folding their four legs beneath them.

Dagul offered refreshment.

"Well, did you get this Earth creature's story?" he asked.

Goin produced a packet of thin tablets from a satchel.

"Yes, we got it—in the end. I've had all my assistants and brightest students working on it but it's not been easy even so. They seem to have been further advanced in physical science than we are. That made parts of it only roughly translatable but I think you'll be able to follow it. A pretty sort of villain this Gratz makes himself out to be—and he's not much ashamed of it."

"You can't be a good villain if you are ashamed."

"I suppose not but it's made me think. Earth seems to have been a rotten planet."

"Worse than Venus?" asked Dagul bitterly.

Goin hesitated. "Yes, I think so, according to his account—but probably that's only because it was further developed. We're going the same way—graft, vested interests, private traders without morals, politicians without conscience. I thought they only existed here, but they had them on Earth—the whole stinking circus. Maybe they had them on Mars too if we only knew."

"I wonder?" Dagul sat for some moments in contemplation. "You mean that Earth was just an exaggerated form of the mess we're in?"

"Exactly. Makes you wonder if life isn't a disease after all—a kind of corruption which attacks dying planets, growing more and more vicious in the higher forms. And as for intelligence—"

"Intelligence," said Dagul, "is a complete snare and delusion. I came to that conclusion long ago. Without it you are wiped out—with it you wipe out one another, eventually yourself."

Goin grinned. Dagul's hobby-horses were much ridden steeds.

"The instinct of self-protection—" he began.

"—is another delusion as far as the race is concerned," Dagul finished for him. "Individuals may protect themselves but it is characteristic of an intelligent race to try continually by bigger and better methods to wipe itself out. Speaking dispassionately I should say that it's a very good thing, too. Of all the wasteful destructive pointless..."

Goin let him have his say. Experience told him that it was useless to attempt to stem the flood. At length came a pause and he thrust forward his packet of tablets.

"Here's the story. I'm afraid it will encourage your pessimism. The man, Gratz, is a self-confessed murderer for one thing."

"Why should he confess?"

"It's all there. Says he wants to warn us against Earth."

Dagul smiled slightly. "Then you've not told him?"

"No, not yet."

Dagul reached for the topmost tablet and began to read.

CHAPTER II

The Earthman's Story

I, MORGAN GRATZ of the planet Earth, am writing this as a warning to the inhabitants of Venus. Have nothing to do with Earth if you can help it—but if you must, be careful. Above all I warn you to have no dealings with the two greatest companies of Earth.

If you do, you will come to hate Earth and her people as I do—you will come to think of her, as I do, as the plague spot of the universe. Sooner or later, emissaries will come—representatives of either Metallic Industries or International Chemicals will attempt to open negotiations. Do not listen to them.

However honeyed their words or smooth their phrases distrust them, for they will be liars and the servants of liars. If you do trust them you will live to regret it and your children will regret it and curse you. Read this and see how they treated me, Morgan Gratz.

My story is best started from the moment when I was shown into the Directors' Room in the huge building which houses the executive of Metallic Industries. The secretary closed the tall double doors behind me and announced my name.

"Gratz, sir."

Nine men seated about a glass-topped table turned their eyes upon me simultaneously but I kept my gaze on the chairman who topped the long table.

"Good morning, Mr. Drakin," I said.

"Morning, Gratz. You have not met our other directors, I believe."

I looked along the row of faces. Several I recognized from photographs in the illustrated papers. Others I was able to identify, for I had heard them described and knew that they would be present. There is no mystery about the directors of Metallic Industries Incorporated.

Among them are several of the world's richest men and to be mounted upon such pinnacles of wealth means continual exposure to the floodlights of publicity. Not only was I familiar with their appearances but in common with most I was fairly conversant with their histories. I made no comment, so the chairman continued.

"I have received your reports, Gratz, and I am pleased to say that they are model documents—clear and concise—a little too clear, I must own, for my peace of mind. In fact, I confess to apprehension and, in my opinion, the time has come for decisive measures. However, before I suggest the steps to be taken I would like you to repeat the gist of your reports for the benefit of my fellow directors."

I had come prepared for this request and was able to reply without hesitation.

"When it first became known to Mr. Drakin that International Chemicals proposed to build a ship for the navigation of space, he approached me and put forward certain propositions. I, as an employee of International Chemicals, being concerned in the work in question, was to keep him posted and to hand on as much information, technical and otherwise, as I could collect without arousing suspicion.

"Moveover, I was to find out the purpose for which International Chemicals intended to use her. I have carried out the first part of my orders to the chairman's satisfaction but it is only in the last week that I have been able to discover her destination."

I paused. There was a stir among the listeners. Several leaned forward with increased interest.

"Well," demanded a thin, predatory-faced man on the chairman's right, "what is it?"

"The intention of the company," I said, "is to send their ship, which they call the *Nuntia*, to Venus."

They stared at me. Save for Drakin, to whom this was not news, they appeared dumbfounded. The cadaverous-looking man was the first to find his voice.

"Nonsense!" he cried. "Preposterous! Never heard of such a thing. What proof have you of this ridiculous statement?"

I looked at him coldly.

"I have no proof. A spy rarely has. You must take my word for it."

"Absurd. Fantastic nonsense. You stand there and seriously expect us to believe on your own, unsupported statement that I. C. intends to send this machine to Venus? The moon would be unlikely enough. Either they have been fooling you or you must be raving mad. I never heard of such rubbish. Venus, inded!"

I regarded the man. I liked neither his face nor his manners.

"Mr. Ball sees fit to challenge my report," I said. "This, gentlemen, will scarcely surprise you, for you must know as well as I that Mr. Ball has been completely impervious to all new ideas for the past forty years."

The emaciated Mr. Ball goggled while several of the others hid smiles. It was rarely that his millions did not extract sycophancy but I was in a strong position.

"Insolence," he spluttered at last. "Damned insolence, Mr. Chairman. I demand that this man—"

"Mr. Ball," interrupted the other coldly. "You will please to control yourself. The fact that Gratz is here at all is a sign not only that I believe him but that I consider his news seriously to concern us all."

"Nonsense. If you are going to believe every fairy story that a paid spy—"

"Mr. Ball, I must ask you to leave the conduct of this matter to me. You knew, as we all did, that I. C. were building this ship and you knew that it was intended for space-travel. Why should you disbelieve the re-

port of its destination? I must insist that you control yourself."

MR. BALL subsided, muttering indefinite threats. The chairman turned back to me. "And the purpose of this expedition?"

I was only able to suggest that it was to establish claims over territories as sources of supplies. He nodded and turned to address the rest.

"You see, gentlemen, what this will mean? It is scarcely necessary to remind you that I. C. are our greatest rivals, our only considerable rivals. The overlapping of interests is inevitable. Metals and chemicals obviously cannot be expected to keep apart. They are interdependent. It cannot be anything but a fight for survival between the two companies.

"At present we are evenly balanced in the matter of raw materials—and probably shall be for years to come. But—and this is the important point—if their ship makes this trip successfully what will be the results?

"First, of course, they will annex the richest territories on the planet with their raw materials, and later import these materials to Earth. Mind you, this will not take place at once—but make no mistake, it will come, sooner or later, as inevitably as tomorrow.

"Once the trip has been successfully made the inventors will not rest until they have found a way of carrying freight between the two worlds at economic rates. It may take them ten years to do it, it may take them a century, but sooner or later, do it they will.

"And that, gentlemen, will mean the end of Metallic Industries."

There was a pause during which no one spoke. Drakin looked around to see the effect of his words.

"Gratz has told me," he continued, "that I. C. is convinced their ship is capable of the journey. Is that not so?"

"It is," I confirmed. "They have complete faith in her and so have I."

Old John Ball's voice rose again. "If this is not nonsense why have we let it go on? Why has I. C. been allowed to build this vessel without interference? What is the good of having a man there who does nothing to hinder the work?" He glared at me.

"You mean?" inquired Drakin.

"I mean that this man has been excellently placed to work sabotage. Why has there been none? It should be simple enough to cause an 'accidental' explosion."

"Very simple," agreed Drakin. "So simple that I. C. would jump to it at once. Even if there were a genuine accident they would suspect that we had a hand in it. Then we should have our hands full with an expensive vendetta. Furthermore I. C. would recommence building with additional precautions and it is possible that we might not have a man on the inside.

"I take it that we are all agreed that the *Nuntia* must fail—but it must not be a suspicious failure. The *Nuntia* must sail. It is up to us to see that she does not return.

"Gratz has been offered a position aboard her but has not as yet returned a definite answer. My suggestion is that he should accept the offer with the object of seeing that the *Nuntia* is lost. The details I can leave to him."

Drakin went on to elaborate his plan. Directly the *Nuntia* had left, Metallic Industries would begin work on a space-flyer of their own. As soon as possible she would follow to Venus. Meanwhile I, having settled the *Nuntia*, would await her arrival.

In the unlikely event of the planet being found inhabited I was to get on good terms with the natives and endeavor to influence them against I. C. When the second ship arrived I was to be taken off and brought back to Earth while a party of M. I. men remained to survey and annex territory. On my return I would be sufficiently rewarded to make me rich for life.

"You will be doing a great work for us," he concluded, "and we do not forget our servants." He looked me straight in the eye as he said it. "Will you do it?"

I hesitated. "I would like a day or so to think it over."

"Of course. That is only natural. But there is not a great deal of time to spare—will you let me have your answer by this time tomorrow? It will give us a chance to make other arrangements in case you refuse."

"Yes, sir. That will do."

With that I left them. As to their fur-

ther deliberations I can only guess. And my guesses are bitter.

Beyond an idea that it would appear better not to be too eager I had no reason for putting off my answer. Already I had determined to go—and to wreck the *Nuntia*. I had waited many years to get in a blow at I. C., and now was my chance.

Ever since the death of my parents I had set my mind on injuring them. Not only had they killed my father by their negligence in the matter of unshielded rays but they had stolen his inventions and robbed him by prolonged litigation.

Enough, you say, to make a man swear revenge. But it was not all. I had to see my mother die in poverty when a few hundred dollars would have saved her life—and all our dollars had gone in fighting I. C.

After that I changed my name, got a job with I. C. and worked—hard. Mine was not going to be a paltry revenge. I was going to work up until I was in a responsible position, one from which my blows could really hurt them.

I had allied myself with Metallic Industries because this was their greatest rival and now I was given a chance to wreck the ship to which they had pinned such faith. I could have done that alone but it would have meant exile for the rest of my life. Now M. I. had smoothed the way by offering me passage home.

Yes, I was going to do it. The *Nuntia* should make one trip and no more.

But I'd like to know just what it was they decided in the Board Room after I left.

CHAPTER III

Murders in Space

THE *Nuntia* was two weeks in space but nobody was very happy about it.

In those two weeks the party of nine on board had been reduced to seven and the reduction had not had a good effect upon our morale. As far as I could tell there was no tangible suspicion afoot—just a feeling that all was not well.

Among the hands it was rumored that Hammer and Drafte had gone crazy before they killed themselves. But why had they gone crazy? That was what worried the rest. Was it something to do with conditions in space—some subtle, unsuspected emanation? Would we all go crazy?

When you are cut off from your kind you get strange fancies. Imagination gets overheated and you become too credulous. That is what used to happen to sailors on their long voyages in the old windjammers. It began to happen to our crew out in space. They began to attribute the deaths to uncanny malign influences in a way which would never have occurred to them on Earth. It gave me some amusement at the time.

First had been Dale Hammer, the second navigator. Young, a bit wild at home, perhaps, but brilliant at his job, he was proud and overjoyed that he had been chosen for this voyage. He had gone off duty in a cheerful frame of mind.

A few hours later he had been found dead in his bunk with a bottle of tablets by his side—one had to take something to insure sleep out here. Everyone agreed that it was understandable, though tragic, that he had taken an overdose by mistake.

It was after Ross Drafte's disappearance that the superstitions began to cluster. He was an odd man with an expression which was frequently taciturn and eyes in which burned feverish enthusiasms. A failure might have driven him desperate but under the circumstances, he had everything to live for.

He was the designer of the *Nuntia* and she, the dream of his life, was endorsing his every expectation. When we returned to make public the story of our voyage his would be the name to be glorified through millions of radios, his the face which would stare from hundreds of newspapers—the conqueror of gravitation. And he had disappeared.

The air pressure graph showed a slight dip at one point and Drafte was no more.

I saw no trace of suspicion. No one had even looked askance at me nor, so far as I knew, at anyone else. No one had the least inkling that one man aboard the ship could tell them exactly how those two men had died. There was just the conviction that something queer was afoot.

And now it was time for another.

Ward Govern, the chief engineer, was in

the chartroom, talking with Captain Tanner. The rest were busy elsewhere. I slipped into Govern's cabin unobserved. His pistol I found in the drawer where he always kept it and I slipped it into my pocket. Then I crossed to the other wall and opened the ventilator which communicated with the passage. Finally, after carefully assuring myself that no one was in sight, I left, closing the door behind me.

I had not long to wait. In less than a quarter of an hour I heard the clatter of a pair of magnetic shoes on the steel floor and the engineer passed cheerfully by on his way to turn in. The general air of misgiving had had less effect upon him than upon anyone else. I heard the door slam behind him. I allowed him a few moments before I moved as quietly to the ventilator as my magnetic soles would allow.

I could see him quite easily. He had removed his shoes and was sitting at a small wall desk, entering the day's events in his diary. I thrust the muzzle of the pistol just within the slot of the ventilator and with the other hand began to make slight scratching noises. It was essential that he should come close to me. There must be a burn or at least powder marks.

The persistent scratching began to worry him. He glanced up in a puzzled fashion and held his head on one side, listening. I went on scratching. He decided to investigate and released the clips which held his weightless body to the chair. Without bothering to put on the magnetic shoes, he pushed himself away from the wall and came floating towards the ventilator. I let him get quite close before I fired.

There was a clatter of running feet mingling with cries of alarm. I dropped the pistol inside my shirt and jumped around the corner, reaching the cabin door just ahead of a pair who came from the other direction. We flung it open and I dashed in. Govern's body under the impetus of the shot had floated back into the middle of the room. It looked uncanny, lying asprawl in mid-air.

"Quick," I yelled, "fetch the Captain!"

ONE of them pelted out of the door. I managed to keep my body between the other and the corpse while I closed the dead fingers around the pistol. A few seconds later everybody had collected about the doorway and the Captain had to push them aside to get in.

He examined the body. It was not a pleasant sight. The blood had not yet ceased to flow from the wound in the head but it did not drip as it would on Earth. Instead it had spurted forth to form into red spheres, which floated freely close beside the corpse. There was no doubt that the shot had been fired at close range. The Captain looked at the outflung hand which gripped the automatic.

"What happened?"

No one seemed to know.

"Who found him?"

"I was here first, sir," I said. "Just before the others."

"Anyone with you when you heard the shot?"

"No, sir. I was just walking along the passage—"

"That's right, sir. We met Gratz running 'round the corner." Somebody supported me.

"You didn't see anyone else about?"

"No, sir."

"And was it possible, do you think, for anybody to have gotten out of the room unseen between the time of the shot and your arrival?"

"Quite impossible, sir. He would have been bound to walk straight into me or the others—even if there had been time for him to get out of the room."

"Very well. Please help me with this." He turned to the other four who were still lingering in a group near the door. "You men get back to work now."

Two began to move off but the other pair, Willis and Trail, both mechanics, held their ground.

"Didn't you hear me? Get along there."

Still they hesitated. Then Willis stepped forward and the Captain's unbelieving ears heard his demand that the *Nuntia* be turned back.

"You don't know what you're saying, man!"

"I do, sir, and so does Trail. There's something queer about it all. It's not natural for men to kill themselves like this. Perhaps we'll be next. When we signed up we knew we'd have dangers we could see but we didn't reckon with something that makes

you go mad and kill yourself. We don't like it—and we ain't going on. Turn the ship back."

"Don't be a pair of fools. You ought to know that we can't turn back. What do you think this is—a rowboat? What's the matter with you?"

The two faces in front of him were set in lines of stolid determination. Willis spoke again.

"We've had enough and that's flat. It was bad enough when two had gone but now it's three. Who's going to be the next? That's what I want to know."

"That's what we all want to know," the Captain said meaningly. "Why are you so anxious to have the ship turned back?"

"Because it's wrong—unlucky. We don't want to go crazy even if you do. If you don't turn her back we will."

"So that's the way it blows, is it? Who's paying you for this?"

Willis and Trail remained uncomprehending.

"You heard me," he roared. "Who's behind you? Who's out to wreck this trip?"

Willis shook his head. "Nobody's behind us. We just want to get out of this before we go crazy too," he repeated.

"Went crazy, eh?" said the Captain with a sneer. "Well, maybe they did and then again, maybe they didn't—and if they didn't I've got a pretty good idea what happened to them." He paused. "So you think you'll scare me into turning back, do you? Well, by the stars, you won't, you bilge rats. Get back to your work. I'll deal with you later."

But neither Willis nor Trail had any intention of getting back. They came on. Trail was swinging a threatening spanner. I snatched the pistol from the corpse's hand and got him in the forehead. It was a lucky shot. Willis tried to stop. I got him, too.

THE Captain turned and saw me handling the pistol. The suddenness of the thing had taken him by surprise. I could see that he didn't know whether to thank me or to blame me for so summary an execution of justice. There was no doubt that the pair had mutinied and that Trail, at least, had meant murder. Strong and Danver, the two men in the doorway, stared speechlessly. Nine men had sailed in the *Nuntia*—four now remained.

For the time the Captain said nothing. We waited, looking at the two bodies still swaying eerily, anchored to the floor by their magnetic shoes. At last the Captain broke the silence.

"It's going to be hard work for four men," he said. "But if each of us pulls his weight we may win through yet. To the two of you all the engine room work will fall. Gratz, do you know anything of three-dimensional navigation?"

"Very little, sir."

"Well, you'll have to learn—and quickly."

After the business of disposing the bodies through the airlock was finished, he led me to the navigation room. Half to himself I heard him murmur, "I wonder which it was? Trail, I should guess. He's the type."

"Beg your pardon, sir?"

"I was wondering which of those two was the murderer."

"Murderer, sir?" I said.

"Murderer, Gratz. I said it and I mean it. Surely you didn't think those deaths were natural."

"They seemed natural."

"They were well enough managed but there was too much coincidence. Somebody was out to wreck this trip and kill us all."

"I don't see—"

"Think, man, think," he interrupted. "Suppose the secret of the *Nuntia* got out in spite of all our care? There are plenty of people who would want her to fail."

I flatter myself that I managed my surprise rather well.

"Metallic Industries, you mean?"

"Yes, and others. No one knows what may be the outcome of this voyage. There are a lot of people who find the world very comfortable as it is and would like to keep it so. Suppose they had planted one of those men aboard?"

I shook my head doubtfully. "It wouldn't do. It'd be suicide. One man couldn't get this ship back to Earth."

"Nevertheless I'm convinced that either Willis or Trail was planted here to stop us from succeeding."

The idea that both the men were genuinely scared and wanted only to get back to Earth had never struck him. I saw no reason to let it.

"Anyway," he added, "we've settled with the murdering swine now—at the cost of

three good honest men."

He took some charts from a drawer. "Now, come along, Gratz. We must get to work on this navigation. ,Who knows but that all our lives may soon depend on you."

"Who indeed, sir," I agreed.

CHAPTER IV

Stealing the Ship

ANOTHER fortnight passed before the *Nuntia* at last dipped her nose into the clouds which had always made the nature of Venus' surface a matter for surmise. By circling the planet several times, Captain Tanner contrived to reduce our headlong hurtling to a manageable speed.

After I had taken a sample of the atmosphere—(which proved almost identical with that of Earth)—I took my place close beside him, gaining a knowledge of how the ship must be handled in the air. When the clouds closed in on our windows to obscure the universe we were traveling at a little more than two hundred miles an hour. Despite our extended wings we required the additional support of vertical rockets.

The Captain dropped cautiously upon a long slant. This, he told me, would be the most nerve-racking part of the entire trip. There was no telling how far the undersides of the clouds were from the planet's surface. He could depend on nothing but luck to keep the ship clear of mountains which might lurk unseen in our path.

He sat tensely at the control board, peering into the baffling mist, ready at a moment's notice to change his course although we both knew that the sight of an obstacle would mean that it was too late. The few minutes we spent in the clouds seemed interminable.

My senses drew so taut that it seemed they must snap. And then, when I felt that I could not stand it a moment longer, the vapors thinned, dropped behind and we swept down at last upon a Venusian landscape.

Only it was not a landscape, for in every direction stretched the sea—a gray miserable waste. Even our relief could not make the scene anything but dreary. Heavy rain drove across the view in thick rods, slashing at the windows and pitting the troubled water.

Lead-gray clouds, heavy with unshed moisture seemed to press down like great, gorged sponges which would wipe everything clean. Nowhere was there a darkling line to suggest land. The featureless horizon which we saw dimly through the rain was a watery circle.

The Captain leveled out and continued straight ahead at a height of a few hundred feet above the surface. There was nothing for it but to go on and hope that we should strike land of some kind. For hours we did, and for the difference it made to the scene, we might have been stationary. It was just a matter of luck.

Unknowingly, we must have taken a line on which the open sea lay straight before us for thousands of miles. The rain, the vastness of the ocean and the reaction from our journey combined to drive us into depression. Was Venus, we began to ask ourselves, nothing but a sphere of water and clouds?

At last I caught a glimpse of a dark speck away to starboard. With visibility so low I could not be certain what it was. We had all but passed it before I drew the Captain's attention. Without hesitating he swerved towards it and we both fixed our eyes on it and anxiously watched it grow.

As we drew closer it proved to be a hill of no great size, rising from an island of some five or six square miles. It was not such a spot as one would have chosen for a first landing but he decided to make it. We were all thoroughly tired of our cramped quarters. A few days of rest and exercise in the open air would put new heart in us.

It would be absurd for an Earthman to describe Venus to Venusians but there are differences between your district of Takon and the island where we landed which I find very puzzling. Moreover the conditions which I found elsewhere also differ from those which abide here. I know nothing about the latitude of these places but it seems that they must be far removed from here to be so unlike.

For instance, our island was permanently blanketed beneath thick clouds. One never saw the sun at all, but for all that the heat

was intense and the rain, which seldom ceased, was warm. Here in Takon, on the other hand, you have a climate not unlike that of our temperate regions—occasional clouds, occasional rain, warmth that is not too oppressive.

When I look around and observe your planets and trees I find it hard to believe that they can exist on the same planet with the queer jumble of growths we found on the island. I know nothing of botany, so I can only tell you that I was struck by the quantities of ferns and palms and the almost entire absence of hardwood trees.

Two days were occupied in minor repairs and necessary adjustments, varied by occasional explorations. These were not pleasure trips, for the rain fell without ceasing, but they served to give us some much-needed exercise and to improve our spirits.

On the third day the Captain proposed an expedition to the top of the central hill and we agreed to accompany him. We were all armed, for though the only animals we had seen were small timid creatures which scuttled from our approach, there was no telling what we might encounter in the deeper forest which lay between the hill and the beach where the *Nuntia* rested.

WE ASSEMBLED shortly after dawn, almost in a state of nudity. Since the heat rendered heavy waterproofs intolerable we had decided that the less we wore the better. It would be hard enough work carrying heavy rifles and rucksacks of supplies in such a climate.

The Captain shepherded us out into the steady rain, pushed the outer door to behind us and we began our tramp up the beach. We had all but crossed the foreshore scrub which bordered the forest proper when I stopped abruptly.

"What is it?" asked the Captain.

"Ammunition," I told him. "I put it aside, ready to pack, and forgot to put it in."

"Are you sure?"

I hauled the rucksack off my back and looked through the contents. There was no sign of the packet of cartridges he had given me. In order to travel light we had only a few rounds each. I could not expect the others to share theirs with me in the circumstances. There was only one thing to be done.

"I'll go back for them. It will only take a few seconds," I said.

The Captain grudgingly consented. He disliked inefficiency but could not afford to weaken his party by taking a member of it unarmed into possible dangers. I hurried back to the ship, stumbling along through the sand and shingle. As I pulled open the airlock door I glanced back. The three, I could dimly see, had reached the edge of the forest and were standing under such shelter as they could find, watching me.

I jumped inside and threw down my rifle and rucksack with a clatter. First I rushed for the engines and turned on the fuel taps, then I went forward to the navigation room. Hurriedly I set the controls as I had been shown and pulled over the ignition switch.

With my fingers above the first bunch of firing keys, I looked once more out of the windows. The Captain was pounding across the beach, followed by the others. How he had guessed that there was anything wrong I cannot say. Perhaps his glasses enabled him to see that I was in the control room. Anyway he meant business.

He passed out of my line of sight and a moment later I pressed the firing keys. The *Nuntia* trembled, lurched and began to slither forward across the sand. I saw the other two wave despairing arms. It was impossible to tell whether the Captain had managed to scramble aboard or not.

I turned the rising ship towards the sea. Again I looked back, just in time to see the others running towards a form which lay huddled on the sand. Close beside it they stopped and looked up. They shook wild impotent fists in the direction of my retreating *Nuntia*.

CHAPTER V

The Mysterious Valley

AFTER a few hours I began to grow seriously worried. There must be other land on this planet but I had seen none as yet. I began to have a nasty feeling that it would end with the *Nuntia* dropping into the sea, condemning me to eventual

death by starvation should I survive the fall.

She was not intended to be run single-handed. In order to economize weight, many operations which could easily have been automatic were left to manual control on the assumption that there would always be one or more men on engine room duty. The fuel pressure gauge was dangerously low, but the controls required constant attention, preventing me from getting aft to start the pressure pumps.

I toyed with the idea of fixing the controls while I made a dash to the engine room and back but since it was impossible to find a satisfactory method of holding them the project had to be abandoned. The only thing I could do was to hold on and hope land would show up before it was too late.

In the nick of time it did—a rockbound inhospitable-looking coast but one which for all its ruggedness was fringed to the very edges of the harsh cliffs with a close-pressed growth of jungle. There was no shore such as we had used for a landing ground on the island.

The water swirled and frothed about the cliff-bottom as the great breakers dashed themselves with a kind of ponderous futility against the mighty retaining wall. No landing there. Above, the jungle stretched back to the horizon, an undulating, unbroken plain of tree tops.

Somewhere there I would have to land, but where?

A few miles in from the coast the *Nuntia* settled it for me. The engines stopped with a splutter. I did not attempt to land her. I jumped for one of the spring acceleration hammocks and trusted that it would stand the shock.

I came out of that rather well. When I examined the wrecked *Nuntia,* her wings torn off, her nose crumpled like tinfoil, her smooth body now gaping in many places from the force of the impact, I marveled that anyone could sustain only a few bruises —(acquired when the hammock mountings had weakened to breaking point)—as I did.

There was one thing certain in a very problematical future—the *Nuntia's* flying days were done. I had carried out Metallic Industries' instructions to the full and the telescopes of I. C. would nightly be searching the skies for a ship which would never return.

Despite my predicament—(or perhaps because I had not fully appreciated it as yet)—I was full of a savage joy. I had struck the first of my vengeful blows at the men who had caused my family such misery. The only shadow across my satisfaction was that they could not know that it was I, not Fate, who was against them.

It would be tedious to tell in detail of my activities during the next few weeks. There is nothing surprising about them. My efforts to make the *Nuntia* habitable—my defenses against the larger animals—my cautious hunting expeditions—my search for edible greenstuffs—were such as any man would have made. They were makeshift and temporary.

I did only enough to assure myself of moderate comfort until the Metallic Industries ship should arrive to take me off. So for six months by the *Nuntia's* chronometers I idled and loafed and though it may sometimes have crossed my mind that Venus was not altogether a desirable piece of real estate, yet it was in a detached impersonal way that I regarded my surroundings.

It would make a wonderful topic of conversation when I got home. That "when I got home" colored all my thoughts. It was the constant barrier which stood between me and the life about me. This planet might surround me but it could not touch me as long as the barrier remained in place.

At the end of six months I began to feel that my exile was nearly up. The M. I. ship would be finished by now and ready to follow the *Nuntia's* lead. I waited almost a month longer, seeing her in my mind's eye falling through space towards me. Then it was time for my signal.

I had arranged the main searchlight so that it would point vertically upwards to stab its beam into the low clouds and now I began to switch it on every night as soon as the darkness came, leaving its glare until near dawn. For the first few nights I scarcely slept, so certain was I that the ship must be cruising close by in search of me.

I USED to lie awake, watching the dismal sky for the flash of her rockets, straining my ears for their thunder. But this

stage did not last long. I consoled myself very reasonably that it might take much searching to find me. But all day too I was alert, with smoke rockets ready to be fired the moment I should hear her.

After four months more my batteries gave out. It is surprising that they lasted so long. As the voltage dropped, so did my hopes. The jungle seemed to creep closer, making ominous bulges in my barrier of detachment.

For a number of nights after the filaments had glowed their last I sat up through the hours of darkness, firing occasional distress rockets in forlorn faith. It was when they were gone that I sensed what had occurred. Why I did not think of it before, I cannot tell. But the truth came to me in a flash—Metallic Industries had duped me just as International Chemicals had duped my father.

They had not built—never intended to build—a space-ship. Why should they, once I. C. had lost theirs? That, I grew convinced, was the decision which had been taken in the Board Room after my withdrawal. They had never intended that I should return.

I could see now that they would have found it not only expensive but dangerous. There would be not only my reward to be paid but I might blackmail them. In every way it would be more convenient that I should do my work and disappear. And what better method of disappearance could there be than loss upon another planet?

Those are the methods of Earth—that is the honor of great companies as you will know to your cost should you have dealings with them. They'll use you, then break you.

I must have been nearly crazy for some days after that realization. My fury with my detrayers, my disgust with my own gullibility, the appalling sense of loneliness and above all the eternal drumming of that almost ceaseless rain combined to drive me into a frenzy which stopped only on the brink of suicide.

But in the end the adaptability of my race asserted itself. I began to hunt and live off the land about me. I struggled through two bouts of fever and successfully sustained a period of semi-starvation when my food was finished and game was short.

For company I had only a pair of six-legged, silver-furred creatures which I had trained. I found them one day, deserted in a kind of large nest and dying with hunger. Taking them back with me to the *Nuntia* I fed them and found them friendly little things. As they grew larger they began to display remarkable intelligence. Later I christened them Mickey and Minnie—(after certain classic film stars at home)—and they soon got to know their names.

AND now I come to the last and most curious episode, which I confess I do not yet understand. It occurred several years after the *Nuntia's* landing. A foraging expedition upon which Mickey and Minnie accompanied me as usual had taken us into country completely unknown to me. A scarcity of game and a determination not to return empty-handed had caused me to push on farther than usual.

At last, at the entrance to a valley, Mickey and Minnie stopped. Nothing I could do would induce them to go on. Moreover they tried to hold me back, clutching at my legs with their forepaws. The valley looked a likely place for game and I shook them off impatiently. They watched me as I went, making little whining noises of protest, but they did not attempt to follow.

For the first quarter mile I saw nothing unusual. Then I had a nasty shock. Farther on an enormous head reared above the trees, looking directly at me. It was unlike anything I had ever seen before but thoughts of giant reptiles jumped to my mind.

Tyrannosaurus must have had a head not unlike that. I was puzzled as well as scared. Venus could not be still in the age of the giant reptiles. I could not have lived here all this time without seeing something of them before.

The head did not move—there was no sound. As my first flood of panic abated it was clear that the animal had not seen me. I took cover and moved cautiously closer. The valley seemed utterly silent, for I had grown so used to the sounds of rain that my ears scarcely registered them. At two hundred yards I came within sight of the great head again and descided to risk a shot.

I aimed at the right eye and fired.

NOTHING happened—the echoes thundered from side to side; nothing else moved. It was uncanny, unnerving. I snatched up my glasses. Yes, I had scored a bull's-eye, but . . . Queer. I decided that I didn't like the valley a bit, but I made myself go on.

There was a curious odor in the air, not unpleasant yet a little sickly. Close to the monster I stopped. He had not budged an inch. Suddenly, behind him, I caught a glimpse of another reptile—smaller, more lizard-like but with teeth and claws that made me sweat.

I dropped on one knee and raised the rifle. I began to feel an odd swimming sensation inside my head. The world seemed to be tilting about me. My rifle barrel wavered. I could not see clearly. I felt myself begin to fall. I seemd to be falling a long, long way. . . .

When I awoke it was to see the bars of a cage.

* * * * *

Dagul stopped reading. He knew the rest. "How long ago, do you think?" he asked.

Goin shrugged his shoulders.

"Heaven knows. A very long time, that's all we can be sure of. The continual clouds —and did you notice that he claims to have tamed two of our primitive ancestors? Millions of years."

"And he warns us against Earth." Dagul smiled. "It will be a shock for the poor creature. The last of his race—though not, to judge by his own account, a very worthy race. When are you going to tell him?"

"He's bound to find out soon, so I thought I'd do it this evening. I've got permission to take him up to the observatory."

"Would you mind if I came too?"

"Of course not."

Gratz was stumbling among unfamiliar syllables as the three climbed the hill to the Observatory of Takon, doing his best to drive home his warnings of the perfidy of Earth and the ways of great companies. He was relieved when both the Takonians assured him that no negotiations were likely to take place.

"Why have we come here?" he asked when they were in the building and an assistant, in obedience to Goin's orders, was adjusting the large telescope.

"We want to show you your planet," said Dagul.

There was some preliminary difficulty due to differences between the Takonian and the human eye but before long he was studying a huge shining disc. A moment later he turned back to the others with a slight smile.

"There's some mistake. This is our moon."

"No. It is Earth," Goin assured him.

Gratz looked back at the scarred pitted surface of the planet. For a long time he gazed in silence. It was like the moon and yet—despite the craters, despite the desolation, there was a familiar suggestion of the linked Americas, stretching from pole to pole—a bulge which might have been the West African coast. Gratz gazed in silence for a great while. At last he turned away.

"How long?" he asked.

"Some millions of years."

"I don't understand. It was only the other day—"

Goin started to explain but Gratz heard none of it. Like a man dreaming he walked out of the building. He was seeing again the Earth as she had been—a place of beauty, beautiful in spite of all that man had made her suffer. And now she was dead, a celestial cinder.

Close by the edge of the cliff which held the observatory high above Takon he paused. He looked out across an alien city in an alien world toward a white point that glittered in the heavens. The Earth which had borne him was dead. Long and silently he gazed.

Then, deliberately, with a step that did not falter, he walked over the cliff's edge.

●

Read WINE OF THE DREAMERS, by JOHN D. MacDONALD, an Amazing Novel of the Future Featured in the May Issue of Our Companion Magazine STARTLING STORIES— Now on Sale, 25c Per Copy at all Stands!

Tony was a terrific success as a transdimensional crook — until his future caught up with his past!

The room, the light, the scientist seemed to fade into darkness

A Thief in Time

by RAYMOND A. YOUNG

"SIMPLE, now isn't it?"

Tony Carponi looked at the old man who sat opposite him with narrowed eyes—small and bony with long gray hair that curled around the collar of his shirt, his eyes, sunk in deep hollows, gleaming back at him.

Tony was tall and straight, his coal-black hair shining under the brighc lights of the room. He was young. He had his full life before him but his love of money was even stronger than love for his life.

"Now, let me get this straight, mister." Tony did not even know the man's name. "You're going to give me fifty grand just to step into that—er—box over there?" He tossed his head in the general direction of a maze of wire and box-like affairs.

"That is right." The other nodded. "And all you will have to do is follow the instructions that I gave you."

"But how do I know the thing won't kill me?"

"Mr Carponi, you have my word as a scientist that my apparatus will do you no harm. It will be an absolutely harmless test to prove the practicability of my machine for human transportation.

"It will transport you, through a process which I have perfected, to another

Copyright, 1935, by Continental Publications, Inc.

part of the city. From there I want you to walk to the house of a friend and obtain a small lead tube which he has of mine. Be sure to follow the directions that I have already given you.

"Here is your fifty thousand dollars—it is yours when you return."

Carponi's hand reached instinctively toward his armpit and then he thought better of it. Here this old man was trusting him, although he probably knew that he was a petty gangster. After all, it could do no harm to follow the man's instructions and gain the fifty thousand honestly.

"Okay, mister," he said. "Let's get started."

"That's fine, my boy," the old man responded, getting to his tottery legs. "Now if you will step into this enclosure—"

Tony did as directed. Instantly the scientist began to whirl various dials on a control board and brilliant lights began to blink.

"Remember now," he heard the old man saying as from a distance, "in a moment you will find yourself in an apartment. Go outdoors and walk one block north till you come to the house I have told you about. Tell the gentleman there that 'Ray sent for the lead tube.'"

The voice was becoming fainter and fainter until at last Carponi could no longer hear it. He struggled with an overpowering urge to sleep. The room, the light, the figure of the scientist bending over the dials seemed to fade into darkness. Tony had lost consciousness.

TONY CARPONI awoke with a start. The familiar room with all the wires and tubes was gone. He was sitting on a bright metal disk in the middle of a well-furnished apartment. Must be one of those swanky ultra-modern affairs, he mused to himself, as he looked around. He could hardly recognize the furnishings.

A modernistic clock on the wall chimed three times. This puzzled Carponi for it had been morning when he stepped into the machine. The thing was probably fast, he decided.

His interest in the room however was broken when he remembered his errand. He stood up and went through the door of the apartment into the hall and out into the street.

And then he received a shock.

The first thing that attracted his attention was an airplane that zoomed perilously low overhead. It was like no airplane he had ever seen before. It was gone before he had time to study it closely.

The second thing that struck him as peculiar was the arrangement of the neighborhood. Neat rows of buildings, almost identical to the one he had come out of, lined both sides of the street.

He mentally took down the number of the apartment he had just left to make sure that he could find it again. The street also looked queer and wholly unadapted for automobiles. About ten feet above the ground ran a triple row of tubes that resembled those of neon lights closely.

This was probably one of those model sections of the city that people were always talking about building, Carponi reasoned. At least he had never seen it before. Anyway, about a quarter of a mile down the street on which he was standing was a highway intersection on which a steady stream of cars whirled by. That was reassuring.

Once more remembering his errand, he turned north and walked until he arrived at the building with the number which the scientist had given him.

Inside he was struck by its resemblance to a bank. There was but one person in the room and he stood behind a glass-like enclosure. The man raised his eyebrows quizzically. Tony thought that he was dressed rather queerly.

"'Ray' sent me," Carponi began.

"Yes?" the other responded.

"Yeah, the tube, the lead one, you know."

"Oh, the lead tube?"

Tony was watching the other closely now. Funny, he thought, but the fellow was acting exactly as a teller once had

when he held up a bank. He reached for his gun through force of habit, then drew it as the man moved his hand over to a row of buttons.

"No you don't, mister," he commanded, sticking the heavy automatic against the glass. "Now let's have that tube and be quick about it!"

The man behind the glass cage looked at the gun as though he had never seen one before but evidently came to the conclusion that it would be safer to obey. He opened a heavy steel door and lifted out a small tremendously-heavy lead tube, which he handed through the cage to Tony.

"Thanks," Carponi said, slipping it into his coat pocket.

He hadn't taken two steps out of the door before the air was filled with the din of sirens. He began to run. Finally he looked back and saw the man who had handed him the tube run out of the door and point a long slender pipe at him.

The next instant the ground a few feet away bulged and a terrific detonation split the air. Tony was knocked to his knees but he was up again quickly and darted into the protection of his apartment building.

Once inside he rushed to the apartment in which he had arrived. The metal disk in the center of the room was glowing brightly, he noticed, but he did not hesitate in leaping upon it. In doing so he vaguely noticed that another person was in the room, also that the figure was strangely familiar.

BACK in the scientist's laboratory the old man turned away from a screen which he had been watching and rubbed his hands gleefully.

Five, ten, twenty years passed and Tony Carponi had become a success in life. The fifty thousand dollars he had quickly doubled and then tripled in shrewd dealings in the stock market. He had bought a radio company and was now one of the nation's biggest men.

But regardless of his vast wealth Tony still liked to live moderately. Thus it was he spent most of his spare time in a small apartment in New York's newest suburb.

His health too he had cared for. He exercised every day and watched his diet. He felt pleased when friends remarked that he looked ten, even twenty years younger than he was.

One day, tired out from a strenuous morning, Carponi left his office earlier than usual in the afternoon and decided to go to his apartment to rest. His neat little plane carried him from the office building to his home in a few minutes, where he parked on the roof.

His first indication of anything wrong appeared when he found his door slightly ajar. He stopped short in amazement as he entered the apartment. In the center of the room was a shining metal disk!

A flood of memories seemed to break into Carponi's mind all at once. Where had he seen that disk before? Suddenly he looked at the clock. It was a few minutes past three. Circumstances began to form a long-forgotten link in Tony's mind.

The sound of sirens, the echo of an explosion—yes, Tony had lived through that before! The sound of running feet —and Carponi saw himself as on a screen leap onto the brightly shining disk, just as he had done twenty years before.

His mind was whirling as he saw the disk fade from view. Someone was beating on the door. He walked toward it and stumbled on an ancient automatic which he had dropped twenty years ago.

The thumping continued on the door and someone was demanding that he open in the name of the law.

Disgrace. Humiliation.

He could see his whole background traced. He could see his twenty long years of going straight crumble before the police investigation. Screaming banner headlines in the morning papers floated before his eyes:

FAMOUS RADIO HEAD ROBS GOVERNMENT OF MILLIONS IN RADIUM

He pressed the gun against his forehead and pulled the trigger.

At first Harry thought those tapering shapes were the ships in which the other men had come

The Moon and Mr. Wick

A man may be barred from his purpose by the stupidity of his superiors, but if he should be clever enough—

THE FBI men have come and gone. They investigated all of us who know Mr. Maximilian Wick, searching into what we had learned or guessed of his unusual activities. They dynamited the shallow tunnel he had dug on the old Wick farm west of the campus, before they left and there was something they hauled away in an armored truck.

The official reports on Mr. Wick and his tunnel are locked up now in the files at Washington. Wick himself is back with his freshman classes in the math department but he has had twenty years of practise in keeping his own secrets and he answers questions with a squinted, cheerful grin.

Mrs. Juliana Wick, who usually talks

A New Story by JACK WILLIAMSON

enough for two, is keeping equally quiet. She appears queerly uneasy at any mention of the moon, and she tries to change the subject. She must have had a very trying interview with the Federal men and they apparently impressed her.

We on the faculty, however, can piece the story together. Clayborn is a small college and most of us have known Wick since he came here as a freshman himself, thirty years ago. We had almost forgotten the tunnel on the farm—but we all know Harry Thorwald and we all read the papers.

We had to read the papers because most of us have sons of draft age. Black headlines, all that winter, had told of the bold moves forcing America toward war and we were all bitterly aware that even such quiet towns as ours would be battlefronts when the atomic bombs began to fall.

Wick was always an odd little fellow but we had long since ceased to wonder about the way he spent his summers. The efficient Federal men pointed out clues we should have seen. But, after all, you don't expect anything very remarkable from an assistant math instructor in a college the size of Clayborn.

The greatest puzzle, to our minds, was why he had married Juliana—or, to put the matter the way it seemed, why she married him. We recognized his mathematical genius but Juliana isn't interested in non-Euclidian geometries. Perhaps, as old Professor Pharr used to say, she caught him while he was dreaming of the moon.

For the moon is the one real passion of Wick's whole life. It has always been, since he was a boy. Old Thorwald recalls him when he came to register for his freshman year, inquiring eagerly in the physics department about courses in rocketry and nucleonics.

Those were the days just after World War II when captured German V-2 rockets were already soaring out from Earth on trial flights every few weeks at the White Sands Proving Ground in New Mexico. Other nations were already scrambling hard to overcome the American lead in atomic science. Like many young men of his day Wick had read the future.

Remember the awed wonder of your first real sight of the moon? Perhaps it was through a street telescope or perhaps only with good eyes and a little understanding—but it takes your breath when that bright spot in the sky becomes suddenly a great mountainous sunlit world.

We all have felt the tremendous challenge of that moment. The difference is that Wick didn't forget. He didn't turn away. He wasn't too busy. He knew the promise of the German rockets and he read the terrible warning of Hiroshima. He made up his mind.

"I'm going to the moon." He said that very soberly to Dr. Thorwald. "I'd like to be the first man there. I want courses that will help me go there and get back alive."

Dr. Thorwald didn't smile. A seasoned faculty adviser, he respected the earnestness of the slight determined boy. Perhaps he recalled some magnificent dream of his own. Clayborn didn't offer any courses in astronautics but he pointed out gently that space pilots would require a good foundation in math and general physics.

"Sign me up," the boy told him. "I'll study anything I need to know. I'm going to the moon."

AND Wick applied himself. He didn't care for English literature but his math grades were perfect. He took two degrees in four years and he could soon have had his doctorate if he had wanted that.

"But degrees don't matter," he told Dr. Thorwald. "All I want is a chance to help design the first atomic-powered rocket and fly it—wherever it can go." Wick grinned wistfully. The unbelievers had already made him careful of what he said about his goal.

"The government has a corner on the research, and I'm going to take a Federal job. That looks like the only way."

To the moon, he must have meant—but the job didn't take him there. He was gone three years before he came back to Clayborn, looking tired and thin and despondent, to accept the modest faculty place he still holds.

He had already learned to keep his secrets. He didn't talk to anybody about his Federal work. It was years later that young Harry Thorwald became an atomic technician and brought back the inside story of that secret controversy and Wick's first crushing defeat.

"Everybody says he made a brilliant

start," Harry told his father. "If he'd been willing to play ball with the bureaucrats and the politicians he could have been a big shot on the project. But he was too impatient to get to the moon.

"You can't blame the men at the top. They've had some pretty hard lessons. The money has to come from Congress and the people, and the program has to be announced. You simply can't get funds to fortify the moon. The taxpayers won't foot the bill."

That was years ago, remember, and people can't quite keep up with science. Only a few military experts had realized that the moon fitted all their definitions of the perfect fortress. Hung beyond a quarter-million miles of dangerous emptiness, it is impregnable to any ordinary attack. Modern weapons based there command all of Earth. The gradient of gravitation makes it easy to fire atomic missiles from the moon to Earth but very difficult for Earth to answer.

Wick knew that. He must have read between the lines of confidential Intelligence reports to guess that the experts of other nations knew it too and were acting on their knowledge. He tried to convince his superiors that America had to win the race to the moon—and he failed. Back on campus Wick seemed to forget his defeat. He must have known, as we all did in the uneasy backs of our minds, that the world was rolling on toward the most dreadful war of all but he took no time to brood about it.

Wick was a small man, thin and quick. His bald head was thrust impetuously forward on a scrawny turtle-neck and preoccupied purpose had carved a frown around his shrewd gray eyes. Always in a hurry to get somewhere, he darted about at a nervous half-trot. He taught his freshman classes and started work in a project for his doctorate.

The title of his research paper was to be, *A Vector Topology of n-Dimensional Manifolds*. Wick had brains enough. The same science of relativity and the quantum that split the atom had already revealed space and time to be something else than they appear to the senses. And Wick had the rare kind of vision that can see the deepest secrets of the universe through the abstract symbols of mathematics. He might have been another Einstein if he hadn't wanted to go to the moon.

But he did. The doctorate didn't matter. He abandoned his paper, unfinished, to perfect and patent a remarkable toy. Dr. Thorwald made occasion to reproach him for that bit of foolishness. Wick listened quietly but he knew where he was going.

Maybe you remember the Wix-Stix puzzles. They got to be a fad the summer he put them on the market—perhaps people already needed something to keep them from thinking too much about the atomic war that seemed nearer in every news broadcast.

There were eight notched sticks, you may recall, shaped of bright-colored plastic. They all slipped together to make a little cube with a crooked hole through the center. The trick was to lock them into a solid block, with the ninth stick.

QUITE a trick, because the black ninth stick was perfectly straight and not half long enough. Obviously impossible. Common sense told you it couldn't be done but each set of sticks came with a sealed instruction sheet that told you how to do it.

That was the funny part.

The instructions worked. The diagrams looked like the drawings of multidimensional figures Wick had made for his unpublished paper but the directions were simple enough. You slipped the end of the short black stick into that long crooked opening, following the steps shown in figures one to four—and somehow it snapped through, locking the puzzle together.

It was hard to believe, even when Wick showed you how to do it. Dr. Ralls, the literal-minded head of the math department, measured all the pieces in his set with micrometer calipers and finally came triumphantly to Wick with the bristling equations to prove that no solution was possible in our universe of space and time.

"True, doctor." Wick smiled at him innocently. "Very true."

Possible or not, the puzzle enjoyed an excellent sale. Wick received a modest fortune in royalties before the fad waned but the money didn't change his way of living.

He didn't buy a car—the common highways, he told Dr. Thorwald, don't lead to the moon. It's doubtful that he ever bought a new suit, for he always

appeared before his classes in the same aggressive tweeds that Juliana had selected for him.

But he did spend money—most of it, apparently, for mining machinery. The rocky hillside above the old Wick farmhouse had never promised anything more precious than pasture for a cow but he hired miners to drive a tunnel back into the hill and mechanics to install a good deal of heavy machinery.

The farmers around Clayborn are no different from rural people anywhere and the tunnel caused excited talk. Wick had found a diamond mine, the rumors ran. Midnight trespassers puzzled themselves over stolen samples of a very hard and heavy dark blue rock, unlike any outcroppings in the vicinity, and fragments of a frothy gray pumice.

But Wick kept his secret. The workmen built a heavy door across the tunnel before they left, secured with padlocks and burglar alarms. Wick usually spent his summer vacations at the old farmhouse after that and he was seen now and then entering or leaving the tunnel. He displayed no diamonds, however, nor any other signs of sudden wealth.

True, Juliana was living more pretentiously but Wick had given her all the royalties from that profitable novelty after his tunnel was completed. She built a house and hired a maid. Although she must have been somewhat embarrassed by Mr. Wick's lack of a doctorate she tried hard to dominate the snug little society of Clayborn.

Dr. Thorwald used to feel sorry for Wick. Juliana was a large muscular blonde who had been a gym instructor before she married and her domestic administration was firm. Disapproving of nicotine, she didn't let Wick smoke in the new house.

Wick submitted patiently, for his interests were elsewhere. He spent his summers in seclusion on the farm, seldom appearing for Juliana's social affairs. He came back to face his classes each fall, looking thinner and browner and balder, with a deeper squint to his keen gray eyes, almost as if he had been to the desert. We should have wondered how he got such a tan, working underground.

His secretiveness about the tunnel made Dr. Thorwald wonder if his odd obsession had cracked his able mind until we noticed that he talked no more of flight to space. Instead, as if in compensation for his abandoned dream, he became an armchair authority on the satellite.

His two books, *Selenography* and *Selenology*, were profitably successful. Our undergraduates flocked to hear his new lecture course on lunar astronomy, illustrated with his own curiously photographic drawings of the moonscape. His original hypotheses of the origin and history of the moon appeared in the most distinguished journals. Even Juliana began to show his work a grudging recognition.

Wick still taught his freshman classes. He kept fantastically busy as ever, happily immersed in his work, until the midwinter day that Harry Thorwald came home with appalling news.

PERHAPS all those years of tensions and alarms had numbed us to the reality of war. We had listened to the throb of doom in the throats of too many frenetic commentators. We must have grown to hope that the grim stalemate could endure forever. But Harry Thorwald woke us to the truth.

"I'm not leaking any secrets," he told his father. "I don't need to. Just read the foreign news, and feel the gloom seeping out of Washington. The new Pearl Harbor may come tomorrow or tonight—and this time we lose as many of our cities and bases as they want to smash."

Atomic war has many dreadful meanings to every person on Earth. To old Dr. Thorwald, who was growing feeble and increasingly crippled with arthritis, the overwhelming thing was not the murder of millions or the waste of nations, but the chill realization that Harry had come home to say good-by.

For the youthful nuclear technician expected to perish in the opening hours of the conflict, along with all the inadequate defense forces of America. He didn't tell his father that but the fact was too starkly evident to hide.

"Yes, Dad, they're ready to stab us in the back." Harry was too pale and too grave and his feeble attempts at lightness had failed. "With the same blade that Mr. Wick used to talk about when I was just a boy."

"You mean—they've got to the moon?"

"Five years ago," Harry said. "I'm not spilling any official secrets—because most of the officials are still trying to escape the facts. But there are clues enough if you look for them."

The old man waited painfully.

"The weather boys have been observing peculiar noctilucent clouds in the upper stratosphere," Harry told him. "Ionized exhaust gases, from atomic motors.

"The short-wave hams have picked up faint signals that seem to come from the moon. They do. A few honest astronomers have been getting skeptical eyebrows for reporting lights observed under the rim of the crater Arzachel."

Harry's lean face turned bleak.

"Signal lights," he said. "From a fort there. The fort Mr. Wick wanted to build for America. I think it's finished now. I think it's ready to fire atomic missiles at our cities—if we aren't nice."

"Why—?" The old man had to catch his breath.

"Just from what I see in the papers." Harry grinned a bitter little grin. "That's no military secret. They're talking tough again and this time I think they mean it. Demanding that we give up the rest of Europe to slavery and submit our industries to their own fissionable materials inspection plan—which really means slavery for us."

The old professor nodded unhappily.

"We're already beaten," Harry told him. "And I think the administration knows it."

"No." Dr. Thorwald wet his lips. "We can't just surrender!"

"Not yet." Harry grinned wryly. "We're still blustering and backing down and trying to play the old appeasement game. You can hear the confusion and the desperation in every word from Washington. But public opinion is going to force a stand somewhere and then they'll open fire from the moon."

"That's a pretty long range."

"But the kind of atomic missiles they have now don't need to be accurate. Fairly wide misses are still good enough. And I think they have already tested their weapons."

The old professor blinked.

"The Fordham seismographs registered an earth tremor three months ago from near the little South Atlantic island of Bouvet. The captain of a Norwegian whaler later reported his escape from a volcanic eruption that submerged the whole island. I think that eruption was really the first test shot from the moon."

Dr. Thorwald rubbed stiffly at his chin, nodding reluctantly.

"Let's take this to Wick," he whispered uncertainly. "He knew the danger, years ago. Maybe he can offer something now."

"Nothing he can do." Harry shook his head. "Or anybody. A moon-ship would cost five billion dollars and ten years of time by Wick's own estimate. Too late to start now. And too dangerous. Because they'd open fire at the first hint of the project."

"Anyhow," Thorwald insisted, "let's go to Wick."

They found a bridge party going on downstairs but Wick was alone, up in the big room Juliana called his den. The walls were covered with those strangely realistic drawings of the barren lunar crater-mountains. Something about them gave Harry Thorwald an uneasy feeling that he didn't stop to analyze.

WICK himself must have been busy with his mathematical research, for he got up from a desk cluttered with papers and beautiful little plastic models of impossibly involved geometric figures. He listened to Harry with a deepening frown.

"Might be," he muttered uneasily. "Years since I had a look in Arzachel. Have to move some equipment first but I'll go and see. Call you when I know."

He hurried them out again and interrupted Juliana's party to borrow the keys to her car. He must have driven straight to his tunnel on the farm and the car was parked outside it all next day.

It was dusk when he burst into the back door of Dr. Thorwald's house and the sight of him frightened the professor's wife. His leathery face was red with fresh sunburn, his squinted eyes hollowed and inflamed. Somehow he must have hurt himself. His hands were bruised and he was limping painfully. But he wasn't concerned with himself. "You're right," he told Harry. "I've seen the lunar base and their ships landing with supplies. They're just waiting for the signal." He was breathlessly urgent. "We must take the first plane to Washington."

The crisis burst upon the world the next day. The thin mask of peace was cast aside. The scornful men of power openly mocked the last democracy and the harried statesmen of freedom held frantic conferences over the ultimatum.

"It doesn't matter, Martha," Dr. Thorwald told his wife when she made him leave the radio and come to bed that night. "What if I am worse tomorrow? Our world is ending now."

Wick and Harry Thorwald came down before midnight. Three huge military transports came down recklessly on the inadequate strip at the municipal airport. Taut-faced men piled out of them to unload jeeps and queerly heavy little crates. The jeeps rushed the men and the boxes to the old Wick farm.

Harry Thorwald survived to tell his father something of that strange expedition. The jeeps unloaded the party outside Wick's tunnel and the technicians had to carry the crates from there. That was difficult because Wick made them keep on the pressurized high-altitude flying suits, with separate oxygen bottles, which they had worn in the planes.

Wick unlocked the heavy door. Inside the tunnel, he made everybody wait while he started a motor-generator unit in an excavated niche and adjusted a machine beside it which Harry failed to recognize. Then, gesturing with a flashlight, he led them back into the hill.

A thick conduit ran along each corner of the square passage. Wiring for lights, Harry thought, until he noticed that the illumination came from Wick's flashlight. A dozen yards from the entrance the tunnel turned. Harry saw polished metal balls where the cables bent and it seemed to him that they were glowing faintly with silent brush discharges.

Beyond the turn the rock was different. It had a dark blue color in the flicker of the flashlight and it was so hard that Wick had not timbered the passage.

The tunnel ran straight through that dense blue rock for several hundred feet, Harry says. The small crate on his shoulder had become a difficult load before they reached the second turning of the way.

There, again, he saw a blue shimmer around the metal balls where the conduits bent. Just beyond the turn was an airtight door, much like those on pressurized aircraft. The doorway was awkwardly small for the crates and the clumsily suited men—there were four officers and four civilian technicians, Harry says, besides Wick.

When they had maneuvered themselves through that door they were in a long steel tank. Wick dogged the door carefully shut behind them. He made them all seal their helmets and test the oxygen equipment and then he opened a big valve that somehow let the air out of the tank.

Harry had been in tight spots before. Once a bit of fissionable matter slipped and he was lucky that only his hands were severely burned as he snatched it and tossed it away. But nothing has ever made his flesh crawl, he says, like waiting in that dark chamber with the air whistling out.

BECAUSE he felt the whole tank falling. Something had made him stumble and turn giddy when he came around that last bend in the tunnel and now he felt that steel chamber dropping like an elevator. Terror had almost overmastered his control before he understood that they had entered a weaker field of gravitation.

He had no time to grapple with the staggering meaning of that. For the air was gone with all the sound air carries—and Wick was already busy again, undogging another sealed door at the other end of the tank. He helped the men through that.

They needed help, Harry says. Most of the weight of his load was gone but the decreased gravity made him giddy and uncertain on his feet.

They had come into a dark cave. The pale beam of Wick's flashlight caught a wall of jagged volcanic rock, from which the end of the tank projected. The uneven floor was loose light stuff which gave underfoot like cinders. A thin rope, fastened beside the door, stretched away into the dark.

Wick caught that rope with a heavy-gloved hand and plodded away along it, beckoning for the others to follow. They did so, stumbling disconcertingly.

The silence, to Harry, was the most trying thing. He could hear his own hard breathing and nothing else at all. The other men, dimly seen against the shifting glow of Wick's flashlight ahead,

seemed silently unreal as ghosts.

The time was still close to midnight at Clayborn, Harry knew. But presently, far above and ahead, he saw faint daylight. It grew stronger as they climbed that twisting passage and Wick paused at last in a ragged fissure, still clutching the rope, to let them look outside.

The view was the strangest Harry had ever seen, and the most dreadful when he had time to catch the meaning of it.

The volcanic cave in which they stood must have been near the foot of a towering mountain range. The jagged shadow of it lay densely black for many miles across the pocked and cracked lava fields below.

The long curve of the range came into view, far on the left, saw-toothed summits blazing with hot sunlight. The whole circle, he knew, must be a crater rim although nearer elevations hid the distant farther wall.

The sky above those cruel peaks was oddly dark. Harry had seen stars in it before he was dazzled by the glare of the sunlit cliffs; and now, when Wick pointed, he discovered a bright misty crescent near the zenith, larger than the moon.

Almost before he recognized it Wick was pointing again at the dark volcanic plain beneath. A sharp alarm caught Harry's breath when he saw the smooth roadways and the moving trucks and the long rows of tall metal hulls.

At first he thought those tapered gleaming shapes were the ships in which the other men had come. Then, as the bulky arm of Wick's pressurized suit moved again, he saw three actual ships standing at the junction of the roads, aluminum-colored monoliths which dwarfed the lesser hulls.

Dread caught his throat as he understood. The smaller machines were the missiles, each intended for one city of America. His eyes followed a moving truck again, and then he found the men, awkward in their own bulging armor, busy about the standing missiles.

He knew they were preparing to fire.

Shuddering in that dead silence, Harry started when Wick jogged his arm. Again he followed the nervous flicker of the flashlight, through smothering night. At the end of the rope it was tied to an iron spike driven in the cavern wall. Wick gestured at the crates to say that this was the point he had chosen.

The commanding officer took the flashlight then and made Wick stand away, for the contents of the crates were secret. The assembly took very little time, for all the men were trained to work in high-altitude equipment. Harry set the timing device and the officer led the way back.

They didn't stop to look out again, for they had allowed themselves the narrowest possible margin of time. The rope brought them back to that steel tank. They tumbled breathlessly inside, and Wick hastily sealed the door behind them.

FIVE minutes later they came staggering out of the tunnel again into a quiet night on Earth. Harry listened thankfully to the chirp of a cricket, he says, and even to the grating of gravel under his thick boots. He opened his helmet, glad to feel the cool west wind on his face.

The pale setting moon was low in the west, an impossible quarter-million miles away. He stood staring at it, remembering that harshly-lit landscape and the immense misty crescent standing above it. Something raised goose pimples on his skin.

Still standing there he saw the point of sudden light that burst out like a blue star near the center of the lunar disk. Voiceless with wonder he caught Wick's arm and pointed. They watched together as that far light yellowed and reddened and faded away.

"That was it," Wick whispered softly. "The nuclear mine we planted in the bluff above their lunar base. I think their foreign policy will change."

It did. The costly effort to reach the moon and establish that base must have drained their resources and the disaster at Arzachel apparently left them unprepared for any more primitive sort of war. Their propagandists discovered a sudden admiration for democracy and peace.

That's the story as far as we know it, except for the question of how Mr. Wick was able to dig his tunnel to the moon. Harry Thorwald went to see him in his den to ask him that.

"Here's your answer, Harry."

Wick grinned at him, his sharp gray

eyes squinted from the glare of the long lunar days, and fumbled in the desk to find a dusty little carton packed with the nine plastic pieces of a Wix-Stix puzzle.

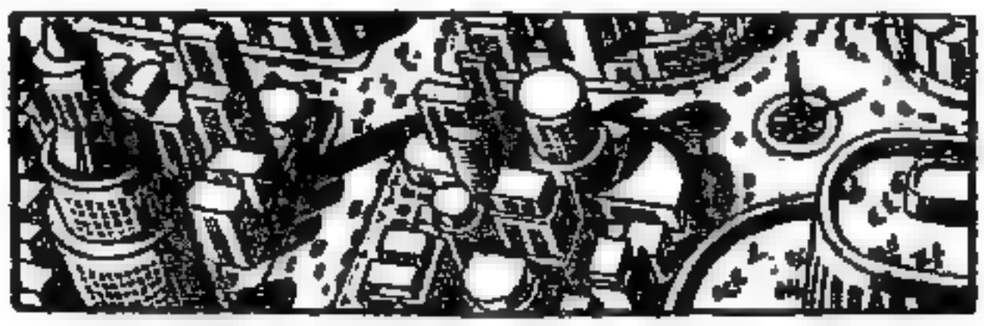
But Harry wasn't satisfied.

"Take a world of one dimension," Wick told him cheerfully. "Take a piece of string. No matter how far apart two knots are tied, you can put them very close together in another dimension outside the string."

"You mean—" Harry gulped. "That tunnel in the blue rock—where was it?"

Wick merely tapped the puzzle in the box and perhaps that's the answer. Perhaps that short black stick fits around that long crooked hole in the cube in the same way that the tunnel was a short cut around the vaster distance from Earth to the moon. Perhaps that's it, but Wick explained no farther.

"Help yourself." Grinning, he offered cigarettes in a new silver case. "Juliana says she doesn't mind my smoking in the house any more," he added happily. "I don't know why but she says she doesn't mind at all."



From the Annals of Science

FIRE is said to have been first used to win a battle by the Greco-Sicilian scientist Archimedes, who is supposed to have used a lens to set afire the Carthaginian fleet attacking Syracuse while the fleet was still at a considerable distance away. It is believed likely that the ship Archimedes aimed at was one that had approached close to shore, and that a friendly wind sent the flames toward other vessels.

A HEADLESS chicken lived for a year—and might have lived longer but for negligence. Some years ago William Hinkelman of Modesto, California, chopped off the head of a chicken and gave the bird to the maid to prepare for dinner. Several minutes later the maid ran screaming from the kitchen yelling that the chicken was strutting around her domain. It was. The headless chicken was kept alive by feeding it through a tube inserted in its neck, until one day an attendant neglected to clear the growing flesh from the tube and the fowl was asphyxiated.

CAN a man disappear off the face of the earth? Back in 1810, Benjamin Bathurst, British Ambassador to Austria, arrived in his carriage at an inn in Perlberg, Germany. He drove into the lighted courtyard of the inn with his valet and secretary. Bathurst got out of the carriage, walked around it, and then everyone present lost sight of him. He was never found. What happened? No one knew or dared guess!

THE publication "Luminaria," suspended several years ago in Madrid, Spain, was printed with phosphorous ink so that it could be read in the dark. Just the thing for underground groups! Another unique Spanish newspaper is "Regal," printed on thin sheets of dough with vegetable ink. This paper really makes it possible for one to digest the news—for the reader is urged to save lunch money by eating the paper after reading it.

SIMULATED guns and tanks and airplanes made out of paper, and correct as to minor details, served the British in place of real supplies during the early days of World War II, and effectively fooled the German reconnaissance planes. The British War Office maintains that but for these paper dummies, ingeniously contrived by scientists, the British might have had to withstand a full-scale invasion in the months immediately after Dunkirk.

—*Simpson M. Ritter.*

COSMIC ENCORES

(Continued from page 9)

ING WONDER STORIES for some time to come—except perhaps in special instances. We still have a lot of far older ground to cover.

Hope you like this issue and those to follow as well as you did our first, Rodney. And thanks for telling us so. However there is another side of the coin —one which is revealed darkly in—

ONE LITTLE FACT
by Morton D. Paley

Dear Editor: You neglected to mention one little fact about the next FSQ—will it have a letter column? In hopes that it will I have batted out this epistle.

I and, I believe, many other young fans experienced a great disappointment upon first reading FSQ. It seems that some of the "giants" of the old days just aren't giants when viewed from a present-day point of view. The Weinbaum story, "The Ideal" is an example of this.

Prof. van Manderpootz has often been tagged with the much-maligned term "delightful." I found the prof, whose episodes, thank Ghu, I've never read before, asinine at best and completely unbelievable at worst. The scientific part of the story relied on false logic and the fictional backbone was quite corny. So much for van Manderpootz.

The two novelets were also terrible, with Pragnell's "Visit to Venus" a little better than the unreadable "Children of the Ray." The shorts ranged from very good ("The Molten Bullet") to poor ("Death at the Observatory"), with "Red Shards on Ceres" and "Cosmic Stage" somewhere between the two others.

The two new stories were far superior to the short reprints. I thought "The Star Slaver" the better one, possibly due to my penchant for realism (you know the type—realism . . . Realism! . . . REALISM!!!). Sprague's stories are always realistic (maybe because many are set in the present) and more believable than most stf is.

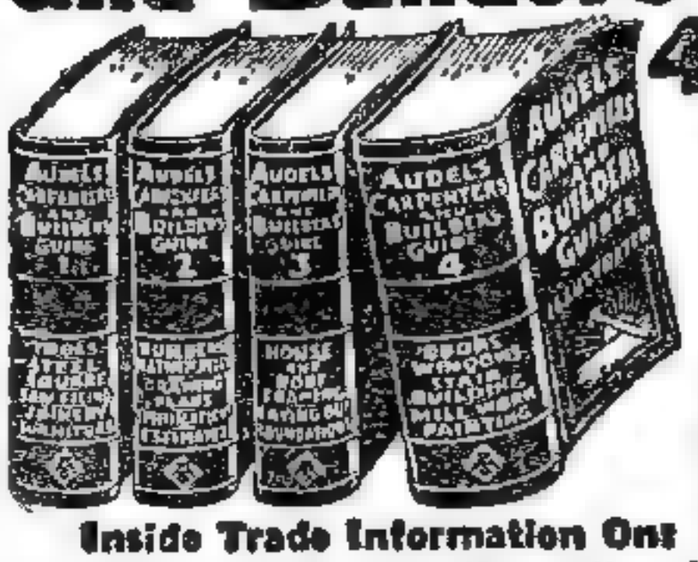
"Trespass" was also fine. It is interesting to compare the egotistical Rubinsky to the egotistical Manderpootz and note the crudeness with which the second character is drawn.

"The Hidden World" was excellent considering its vintage. A word about science—a stream of molecules "pushing" against the air cannot propel anything, as such a phenomenon is, to my knowledge, nonexistent.

Ejected gasses are utilized in jet propulsion due to the Third Law of Motion (the nonencyclopediac can look this up in any Willy Ley book). This was known at the time the story was written (and so was the fact that putrefaction can be caused by nothing but bacteria, Mr. Pragnell!).

[*Turn page*]

AUDELS Carpenters and Builders Guides 4 vols. $6



Inside Trade Information On!

Inside Trade information for Carpenters, Builders, Joiners, Building Mechanics and all Woodworkers. These Guides give you the short-cut instructions that you want—including new methods, ideas, solutions, plans, systems and money saving suggestions. An easy progressive course for the apprentice and student. A practical daily helper and Quick Reference for the master worker. Carpenters everywhere are using these Guides as a Helping Hand to Easier Work, Better Work and Better Pay. To get this assistance for yourself, simply fill in and mail the FREE COUPON below.

How to use the steel square—How to file and set saws—How to build furniture—How to use a mitre box—How to use the chalk line—How to use rules and scales—How to make joints—Carpenters arithmetic—Solving mensuration problems—Estimating strength of timbers—How to set girders and sills—How to frame houses and roofs—How to estimate costs—How to build houses, barns, garages, bungalows, etc.—How to read and draw plans—Drawing up specifications—How to excavate—How to use settings 12, 13 and 17 on the steel square—How to build hoists and scaffolds—skylights—How to build stairs—How to put on interior trim—How to hang doors—How to lath—lay floors—How to paint

AUDEL, Publishers, 49 W. 23rd St., New York 10, N. Y.

Mail Audels Carpenters and Builders Guides, 4 vols., on 7 days free trial. If OK I will remit $1 in 7 days and $1 monthly until $6 is paid. Otherwise I will return them. No obligation unless I am satisfied.

Name_____

Address_____

Occupation_____

Employed by_____ TNR

THOUGHTS HAVE WINGS

YOU CAN influence others with your thinking! Learn to impress others favorably—*get across your ideas*. Let the Rosicrucians show you how to use the power of mind. For *free book* write Scribe R.I.L.

The ROSICRUCIANS (AMORC)
San Jose, California

BE A DETECTIVE
WORK HOME or TRAVEL. Experience unnecessary. DETECTIVE Particulars FREE. Write GEO. T. H. WAGNER, 125 W. 86th St., N. Y.

★$50 IS YOURS for selling 100 boxes greeting cards at $1. Stationery or napkins with name on. Send for selling plan & samples on approval. Costs nothing to try
MERIT, 370 PLANE ST., DEPT. 20 NEWARK 2, N. J.

SHORTHAND in 6 Weeks at Home

Famous Speedwriting system. No signs; no symbols; no machines; uses ABC's. Easy to learn; easy to write and transcribe. Fast preparation for a job. Low cost. 100,000 taught by mail. For business and Civil Service. Also typing. 27th year. Write for free booklet.
SPEEDWRITING, Dept. 9006-A, 55 W. 42nd St., New York 36

Dangers Of Delay On Chronic Ailments

FREE BOOK — Tells How To Help Guard Health

Many facts about colon disorders, headaches, constipation, nervousness or stomach, liver and bladder conditions are explained in a new 40-page FREE BOOK. Write today. Thornton & Minor Clinic, Suite 656, 911 E. Linwood, Kansas City 3, Mo.

Banish the craving for tobacco as thousands have with Tobacco Redeemer. Write for free booklet telling of injurious effect of tobacco and of a treatment which has relieved many men.

In Business Since 1909
300,000 Satisfied Customers
THE NEWELL COMPANY
153 Clayton Sta., St. Louis 5, Mo.

FREE BOOK

Your Horoscope for Each Day this month in EVERYDAY ASTROLOGY — 25c per copy!

RAISE HAMSTERS

The new wonder animals from Syria. Often called Toy Bears. Delightful pets. Everyone wants them. Laboratories need thousands. Clean, odorless. Raise anywhere. A profitable and interesting hobby or business. We furnish breeders and instructions. Write today for free book.

GULF HAMSTERY, 1537 BASIL ST., MOBILE, ALA.

NERVOUS STOMACH

ALLIMIN relieves distressing symptoms of "nervous stomach"—heaviness after meals, belching, bloating and colic due to gas. ALLIMIN has been scientifically tested by doctors and found highly effective. World famous—more than a ¼ billion sold to date. At all drug stores.

ALLIMIN Garlic Tablets

RUPTURED?

Get Relief This Proven Way

Why try to worry along with trusses that gouge your flesh—press heavily on hips and spine—enlarge opening—fail to hold rupture? You need the Cluthe. No leg-straps or cutting belts. Automatic adjustable pad holds at real opening—follows every body movement with instant increased support in case of strain. Cannot slip whether at work or play. Light. Waterproof. Can be worn in bath. Send for amazing FREE book, "Advice To Ruptured," and details of liberal truthful 60-day trial offer. Also endorsements from grateful users in your neighborhood. Write:

Cluthe Sons, Dept. 33, Bloomfield, New Jersey

I hope I haven't seemed too critical in this letter. I think me and FSQ will get along fine, provided you run a few more new stories.—1455 Townsend Avenue, New York 52, New York.

Slightly sour—what? You'll find plenty of scientific errors in the old timers—but we aren't out to alter them in re-editing. Yes, as you see, there will be and is a column in which certain letters are quoted from—although it is doubtful that it will reach the gargantuan size of its mates in THRILLING WONDER STORIES and STARTLING STORIES.

Anyway, you haven't been too critical—just a trifle curmudgeonish, Morton. Which is certainly your privilege.

OH, THAT BIKINI BLOOMER!
by Vernon L. McCain

Dear Editor: I am quite willing to concede that Stanley Weinbaum may have had the foresight to predict a "magnetic impulse wire phonograph" but I absolutely refuse to believe that he predicted "Bikini" bathing suits by name. As long as you're going to publish reprints please don't tamper with them in attempts at modernization. If the stories aren't readable as originally written they don't deserve reprinting.

I am glad to see one science-fiction reprint mag on the market. Reprints are fairly common now, but it's fantasy, fantasy and more fantasy. Of course fantasy matured centuries ago, whereas science fiction is just now coming of age. Thus the stf dates much more easily. However, we newer fans welcome the chance to read the older stuff, anyway.

Oddly enough, the best story in your first issue is the new tale "The Star Slaver." This may prove nothing except that we younger readers prefer what we are used to. Nevertheless, I prefer to believe that modern science-fiction at its best is far superior to that of 10, 15 or 25 years ago.

Hamilton's novel "The Hidden World" was both a pleasant surprise and a disappointment. Pleasant because, though the oldest story in the issue, it was much less dated than some of the others. Disappointing because it's so far below Ed's present level.

The worst story in this issue was your other new tale so don't accuse me of being completely prejudiced for new stories (though I'll admit I'd prefer a companion magazine of new tales for ss and tws to this one). Or better yet make tws (and ss too if you have the newsprint) monthly. However, I'm grateful for small favors and will undoubtedly buy the FSQ faithfully during the foreseeable future.

One last word about that "Bikini" business. Don't you think that was a little obvious, since even readers who weren't aware of Weinbaum's death could look at the 1935 copyright and figure out for themselves that the story was written far previously to World War 2, the atomic bomb, Operations Crossroads and the French bathing suits which adopted the name. Now

we'll never know just how much clothes Weinbaum's heroine was wearing. After all, in 1935, with the exception of a few burlesque queens, no one was wearing anything remotely similar to the Bikini bathing suits.

Speaking of the retreating bathing suit expanse, remember a certain national magazine which ran a picture layout during the war showing bathing styles for the last half century which summed up its layout by smugly remarking that bathing suits had gone as far as they could go? That was back in the broad midriff days. And the end still isn't in sight.

No suggestions for future stories as my reading of old stf is limited to anthologies, HOF and your competitor mags. But, personally, I prefer more stories like "A Visit To Venus" and "Red Shards On Ceres" and less like "The Ideal" (it was a bad story,) besides (my previous complaints). And no more, please, like "Trespass." Comedy is fine in science fiction but not the type of coyness embodied in those two.—c/o Western Union, Ellensburg, Washington.

Blame us for the Bikini bloomer—we had a hunch at the time we'd pulled one but let it pass with the results you have already seen. We promise to be more careful in time to come. As for humor—well, tastes vary as do laughs—from the barely-audible chuckle to the horse guffaw.

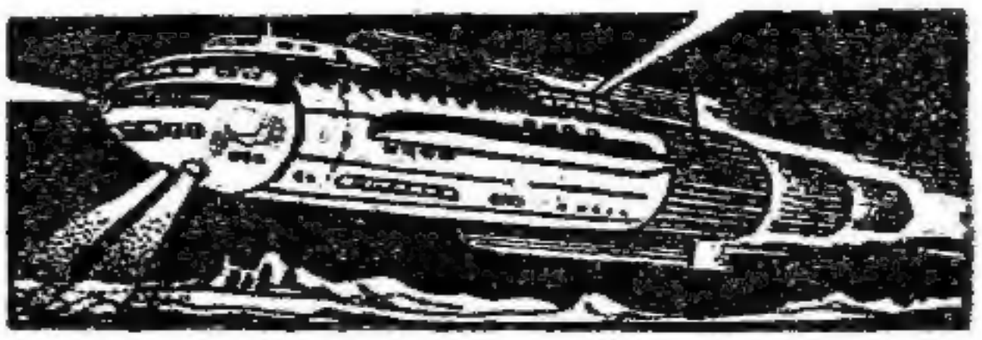
Hmmmm, wonder just what Weinbaum's heroine *was* wearing . . .

RATED
by Claude Plum Jr.

Dear Sir: I bought your magazine yesterday here in San Francisco. And after reading it I

[*Turn page*]

READ OUR COMPANION MAGAZINES



THRILLING WONDER STORIES

and

STARTLING STORIES

•

EACH 25c AT ALL STANDS!

MEN! WOMEN!
New Car given as Bonus!

TAKE ORDERS for Nationally Advertised NYLONS

GUARANTEED NINE MONTHS

EARNED TWO NEW CARS ... and as much as $120.00 in one week
That's the exceptionally fine record of Chas. Mills with the famous Wilknit hosiery line. Offer of New Chevrolet as a bonus open to EVERYONE. Send name for facts FREE.

Sensational Guarantee creating a tremendous demand for Wilknit Nylons! If they run, wear out or even snag from any cause whatever ... within NINE MONTHS ... depending on quantity ... they are replaced FREE OF CHARGE. No wonder it's easy to quickly build up fine, steady, year-'round income. Earnings start immediately. Look at these exceptional figures—Ralph Shearer made $67.11, first week—Mrs. Paul Estes, $42.92—Mrs. Ivey Gentry, $43.37. Doris Jensen in addition to making as much as $17.00 in a single day, earned two cars as EXTRA BONUSES. Learn how you can make money in your full or spare time without a bit of previous experience.

SEND NO MONEY! ... Just Hose Size
When you send for Selling Outfit, I also send your choice of Nylons or Socks for your personal use. Don't lose a minute. Rush name on penny postcard for full money-making facts on Sensational Sales Kit. Send hose size, too. **Lowell Wilkin, WILKNIT HOSIERY CO., 76, Midway, Greenfield, Ohio**

AMAZING OFFER—$40 IS YOURS
FOR SELLING ONLY 50 BOXES
Also entirely different, new Deluxe All-Occasion assortment with feature television card. Little Pearls, Hankie Gift Greetings, other surprise items. Samples on approval. Write today. It costs nothing to try.
FREE SAMPLES IMPRINTED STATIONERY & ROSE SCENTED NOTES
CHEERFUL CARD CO., Dept. AM-9, White Plains, N.Y.

INVENTORS
Learn how to protect your invention. Secure "Patent Guide" together with "Record of Invention" form—without obligation.
CLARENCE A. O'BRIEN & HARVEY JACOBSON
Registered Patent Attorneys
08-D District National Bldg. Washington 5, D. C.

"YOU ARE UNDER ARREST!"

Help Bring Crooks to Justice Through Scientific
CRIME DETECTION!
We have taught thousands this exciting, profitable, pleasant profession. Let us teach you in your own home. Learn Finger Printing, Firearms Identification, Police Photography, Secret Service Methods thoroughly, quickly, at small cost. Over 800 of all American Bureaus of Identification employ I. A. S. students or graduates. We can prepare you for this fascinating work, during spare time. Write today, stating age, for "Blue Book of Crime."
INSTITUTE OF APPLIED SCIENCE, 1920 Sunnyside Ave., Dept. 796-A Chicago 40, Ill.

"I Want You"
Work for "Uncle Sam"
Start as high as $3,450.00 a year
MEN-WOMEN. Prepare NOW at home for Examinations. Veterans get special preference. Write immediately for 40-page Civil Service book, with list of positions and full particulars telling how to qualify.
FRANKLIN INSTITUTE
(Not Government Controlled)
Dept. D-94 Rochester 4, N. Y.

Learn Profitable Profession in 90 days at Home
MEN AND WOMEN, 18 TO 50. Many Swedish Massage graduates make big money! Large full time incomes from doctors, hospitals, sanatoriums, clubs or private practice. Others make good money in spare time. Prepare for future security by training at home and qualifying for Diploma. Anatomy charts and 32-page Illustrated Book FREE!
The College of Swedish Massage
Dept. 963G, 41 E. Pearson, Chicago 11

Be a DETECTIVE

A CHALLENGE FROM WASHINGTON D.C.!

Help Stop Crime! Train at home. Earn big money. Amazing training course from the NATIONS CAPITOL (center of law enforcement) by former U.S. GOVT. AGENT and NAVAL INTELLIGENCE Officer exposes actual methods used by Criminals. Write for FREE BOOK. State age.

INTERNATIONAL DETECTIVE SYSTEM

INTERNATIONAL DETECTIVE TRAINING SCHOOL
1701 Monroe St., N.E. Dept. 196 Washington 18, D.C.

AGENTS WANTED

GET INTO ADVERTISING

MAKE A QUICK KILLING!

FREE SALES KIT

Everything you need to CLEAN up this year! Amazing new catalog and Free sales kit brings you THOUSANDS of Advertising specialties, pricing tickets, electric signs, display devices. Send postcard for it today. Remember it's FREE! Write:
PRICING PRESS, Dept. TF
103 Lafayette St. N. Y. 13, N. Y.

RUPTURE!

An amazing Air-Cushion Invention allows body freedom at work or play. Light, neat, cool, sanitary. Durable, cheap. Day and night protection helps Nature support weakened muscles gently but surely. No risk. **Sent on Trial! Write NOW for free Booklet and Proof of Results. All correspondence confidential.**

Brooks Company, 183-D State St., Marshall, Mich.

CARBURETOR TOO RICH
MAKES MOTORIST TOO POOR

Car owners who are wasting money and not getting proper gas mileage due to over-rich mixtures will be pleased to learn how to save gasoline by VACU-MATING over-rich mixtures. VACU-MATIC fits all cars, trucks and tractors. It is *automatic* and operates on the supercharge principle. Easily installed in a few minutes.

SALESMEN WANTED! Big Profits! Send name, address on penny postcard for *free particulars* and how to get yours for introducing.

VACU-MATIC CO., 7617-1582 W. State St., WAUWATOSA, WIS.

America's Favorite Picture Magazine!

Now on Sale — Only 15c at All Stands!

decided to write my first letter to a magazine.

After reading all the stories in your magazine I came to this conclusion:

The Hidden World by Hamilton	Excellent
A Visit to Venus by Pragnell	Fair
Children of the Ray by Haggard	Fair
The Molten Bullet by Rud	Below average
Red Shards on Ceres by Gallun	Above average
The Star Slaver by Sprague	Different
The Ideal by Weinbaum	Out of this world

The rest of the stories are fair.

I am now going to list some of the stories that I would like to see reprinted in your magazine:

1. *One Way Story* by Keller
Volume 6, Number 8
2. *The Robot Aliens* by Binder
Volume 6, Number 9
3. *Pygmalion's Spectacles* by Weinbaum
Volume 7, Number 1
4. *The Moon Conquerors* by Romans
(Science Quarterly)
Volume 1, Number 2

Seeing you are going to reprint and revive stories from the first Wonder stories have you ever thought of reviving the Science Fiction League? I personally don't think it would interfere with the N. F. F.

Here's looking forward to your next issue, hoping it will improve.—526 Ellis Street, San Francisco 9, Calif.

As it happens, the stories you want reprinted are all under consideration for scheduling in the near future. So live in hope, Claude. Thanks for the letters, gang—and let's keep hearing from you. Fanopinion is a big help in putting out a stf magazine. So long until our next issue!

—THE EDITOR

NEXT ISSUE'S HEADLINERS!

IN CAVERNS BELOW

A Full-Length Novel

By STANTON A. COBLENTZ

BEYOND THE STAR CURTAIN
A Complete Novelet by GARTH BENTLEY

THE SPORE DOOM
A Startling Novelet by EANDO BINDER

THE LIGHT BENDER

(Concluded from page 107)

The short memory of the world forgot quickly the menace of Darkness that had so nearly obliterated it. The affairs of men went on in their accustomed way.

But at times the Chairman of the Council of New York City-State will lock himself up in a little room high in an ancient building and run his fingers once more over the two cylinders and gaze with a vague fear at the paperweight and the drum, which he does not touch.

And there are some who wonder and are curious as to the reason that the Councillor ordered the building of two mighty statues in bronze and the placing of them in a great way of the Lower Canyons.

But the world is busy and has many more important things to think of than two dust-covered statues and the foolish fancies of an old man.

THE LAST PLANET

(Concluded from page 123)

to the instrument panel. A red light was glowing steadily—a warning that the ship was not yet airtight.

"We're getting close!" Elson announced, peering into the transit. Would the red light never change?

"Almost in line," Elson muttered and then the light changed to green. Jay sighed thankfully and lay down on the platform, one hand raised, so that he could pull the activating lever. Out of the corner of his eye he saw Idar lie down.

"Now!" Elson shouted and threw himself flat on the floor.

With a deafening roar the greatest space-ship ever built hurtled with frightful acceleration toward a new sun, toward New Earth, toward a new hope for the technies as well as for the deluded fools who had tried, in their selfish panic, to stop them.

Read Every Issue of
FANTASTIC STORY QUARTERLY

ACCOUNTANT
BECOME AN EXPERT
.. BOOKKEEPER .. C.P.A.

The demand for skilled accountants—*men and women who really know their business*—is increasing. National and state legislation is requiring of business much more in the way of Auditing, Cost Accounting, Business Law, Organization, Management, Finance. Men who prove their qualifications in this important field are promoted to responsible executive positions.

Knowledge of bookkeeping unnecessary. We train you from ground up, or according to your individual needs. Low cost; easy terms.

Send for *free* 48-page book describing the LaSalle accountancy training and the opportunities in this highly profitable field—plus "Ten Years' Promotion in One," a book which has helped many men.

LASALLE EXTENSION UNIVERSITY
A CORRESPONDENCE INSTITUTION
417 S. Dearborn Street
Dept. 6329-HR Chicago 5, Ill.

Please send me "Accountancy, the Profession that Pays"—plus "Ten Years' Promotion in One"—without obligation.

☐ Higher Accountancy
☐ C.P.A. Coaching
☐ Bookkeeping
☐ Law: LL.B. Degree
☐ Business Management
☐ Salesmanship
☐ Traffic Management
☐ Foremanship
☐ Industrial Management
☐ Stenotypy (Machine Shorthand)

Name.....*Age*.....
Address.....
City, Zone, State.....

High School Course at Home
Many Finish in 2 Years

Go as rapidly as your time and abilities permit. Course equivalent to resident school work—prepares for college entrance exams. Standard H. S. texts supplied. Diploma. Credit for H. S. subjects already completed. Single subjects if desired. High school education is very important for advancement in business and industry and socially. Don't be handicapped all your life. Be a High School graduate. Start your training now. Free Bulletin on request. No obligation.

American School, Dept. HA58 Drexel at 58th, Chicago 37

Free for Asthma

If you suffer with attacks of Asthma and choke and gasp for breath, if restful sleep is difficult because of the struggle to breathe, don't fail to send at once to the Frontier Asthma Company for a FREE trial of the FRONTIER ASTHMA MEDICINE, a preparation for temporary symptomatic relief of paroxysms of Bronchial Asthma. No matter where you live or whether you have faith in any medicine under the sun, send today for this free trial. It will cost you nothing.

FRONTIER ASTHMA CO. 462 NIAGARA STREET
582-D FRONTIER BLDG. BUFFALO 1, N. Y.

LEARN AT HOME
TO BE A PRACTICAL NURSE

You can learn practical nursing at home in spare time. Course endorsed by physicians. Thousands of graduates.
HIGH SCHOOL NOT REQUIRED
51st year. One graduate has charge of 10-bed hospital. Another saved $400 while learning. Equipment included. Men, women, 18 to 60. Easy tuition payments. Trial plan.

CHICAGO SCHOOL OF NURSING
Dept. 426, 41 East Pearson Street, Chicago 11, Ill.
Please send free booklet, and 16 sample lesson pages.

Name.....
City.....*State*.....*Age*.....

WOMEN ARE HERE TO STAY!

...OR...

HOW TO STAY HOME WITH A GOOD BOOK--AND LIKE IT!

$2.50 VALUE
(Original Editions Price)
YOURS NOW FOR ONLY 25¢ PER COPY

THE SEX MACHINE
by Shepherd Mead

Mac depends on the Sex Machine when he starts his search for America's sexiest girl! Don't miss the zany pay-off when a buxom lass stands in the way of his fame!

PIKES PEEK OR BUST
by Earl Wilson

Charley sells G-strings to damsels in "un-dress"...and from here you see Broadway backstage. Get the inside dope about Milton Berle, Fred Allen and others!

MACAMBA
by Lilla Van Saher

She tore off her clothes, walked into his arms. But this was just an interlude for Paul, the half-caste in a land of lust and hate, where only Macambas (white men) counted!

GENTLEMEN PREFER BLONDES
by Anita Loos

Gus wanted to improve her "mind", but chorus-cutie Lorelei preferred to make her sex appeal pay off! Read this daffy dame's diary! It's now a Broadway hit! Find out why!

Newsstands are selling out fast! Insure yourself against missing this exciting reading! Order *your* handsomely-bound Popular Library Books by mail *now!* Use the coupon...but hurry...before it's too late!

POPULAR LIBRARY, INC., Dept. TFG-6
10 East 40th Street, New York 16, N. Y.

Send me postpaid the POPULAR LIBRARY BOOKS I have checked. I enclose 25¢ (in coin or in U. S. stamps of small denomination) per copy. (NOTE: We pay postage for orders of four books or more. If ordering *less* than four books, please enclose 5¢ per book extra for postage.)

- ☐ THE SEX MACHINE by Shepherd Mead
- ☐ GENTLEMEN PREFER BLONDES by Anita Loos
- ☐ MACAMBA by Lilla Van Saher
- ☐ PIKES PEEK OR BUST by Earl Wilson
- ☐ FOCUS by Arthur Miller (Not Shown) author of the prize play, "Death of a Salesman".
- ☐ DUKE by Hal Ellson (Not Shown) a novel of teen-age gangsters that will both shock and awaken you.

NAME.....

ADDRESS.....

CITY & ZONE.....STATE.....